# POPULATION, HOUSEHOLDS & FAMILIES PROJECTIONS: NOVA SCOTIA, COUNTIES AND THE HALIFAX/DARTMOUTH CENSUS METROPOLITAN AREA 1987-2006

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# CHAPTER 1: INTRODUCTION

## 1.1 The Need for Demographic Projections

The essence of good planning is the ability to extract the key relationships underlying past events and apply these with some degree of confidence to the future. The ability to project the future from past events has been an elusive but often pursued goal for centuries. In recent years, new analytical tools combined with computer technology have increased the capabilities of those charged with planning for the future.

Demographic projections of a population provide important inputs into the planning process. By quantifying the interconnections between births, deaths, migration, household growth and other demographic and economic factors and projecting these for future years, estimates can be made of the future demand for a variety of services, programs and infrastructure. Amongst the potential uses of these projections are community planning, economic development, market analyses and institutional planning for schools, hospitals and recreational facilities, etc.

Demographic projections rely on the assumption that in the short and medium term factors that affect the demographic future will bear a reasonably close resemblance to the trends apparent in the immediate past. Age specific death rates in Nova Scotia, for example, have shown a consistent decline over the past twenty years.

At the same time, broad social changes throughout North America have produced significant shifts in fertility rates, household and family composition, etc. Changes in the demographic profile of Nova Scotia mirror, to a large extent, these international trends. In addition, the strong correlation between economic changes and population growth implies that unforeseen economic activity can have a substantial impact on population change.

These factors must be considered when preparing demographic projections and incorporating the results in planning exercises.

## 1.2 An Overview of the Methodology

The primary focus of these demographic projections is the future population of Nova Scotia from 1987-2006. These projections are categorized in a variety of ways, including location (Counties and the Halifax/Dartmouth Census Metropolitan Area), age, and sex. Household and family projections are derived from the population projections.

The projections provide one particular scenario for population, household and family growth in Nova Scotia. The results of this study are as realistic as possible given the trends in the various components of population growth (births, deaths and migration). These results "project" past trends, modified in some cases by the researchers' assessment of key social and economic trends that may differentially affect the Province and certain counties.

The population in any area increases when the net change in the components of population growth is positive. The two primary components are natural increase and net migration. The former is defined as the difference between births and deaths in the population; the latter refers to the difference in the movement of people into and out of an area. Trends in the rates of change in births (fertility) and deaths (mortality) are determined analytically and projected for future time periods. Migration changes depend to some degree on past activity and the characteristics of the population, but the major determinant of migration is economic activity.

In preparing these projections, national trends and projections of fertility, mortality and migration rates (recently prepared by Statistics Canada) were carefully examined, along with recent Nova Scotian trends. Historical trends were adjusted where appropriate and applied to the existing provincial population, using a projection technique known as the cohort survival method. This approach applies age and sex-specific fertility and mortality rates to the population. These rates were chosen after carefully reviewing historical data and recent Statistics Canada projections. The population is then "aged" one time period. This projected population is adjusted for migration activity, giving a final projected population. The process is continued for each location, time period and age-sex category of the population.

Household and family projections are derived from the population projections. A modified extrapolation technique was employed to extrapolate changes in household and family headship rates from historical data. A more indepth analysis explaining how households and families were estimated can be found in Appendix A (Technical Appendix).

### 1.3 An Overview of the Report

The Nova Scotia Department of Industry, Trade and Technology, in co-operation with the Atlantic Canada Opportunities Agency, commissioned this study to assist the public and private sectors in planning for the future. Reports such as this one have been an on-going project of the Department since the 1966 Census of Canada.

Chapter 2 describes the key components of population growth and presents historical changes in the Provincial population.

Chapter 3 reviews the historical and projected population growth for the Province's 18 counties and the Halifax/Dartmouth Census Metropolitan Area.

Chapter 4 focuses on the projections of families and households from 1987 to 2006.

Detailed projections as well as a technical description of the methodology are contained in a series of Appendices to the report.

More detailed results as well as special data requests are available from the Department of Industry, Trade and Technology.

# CHAPTER 2: PROVINCIAL POPULATION PROJECTIONS

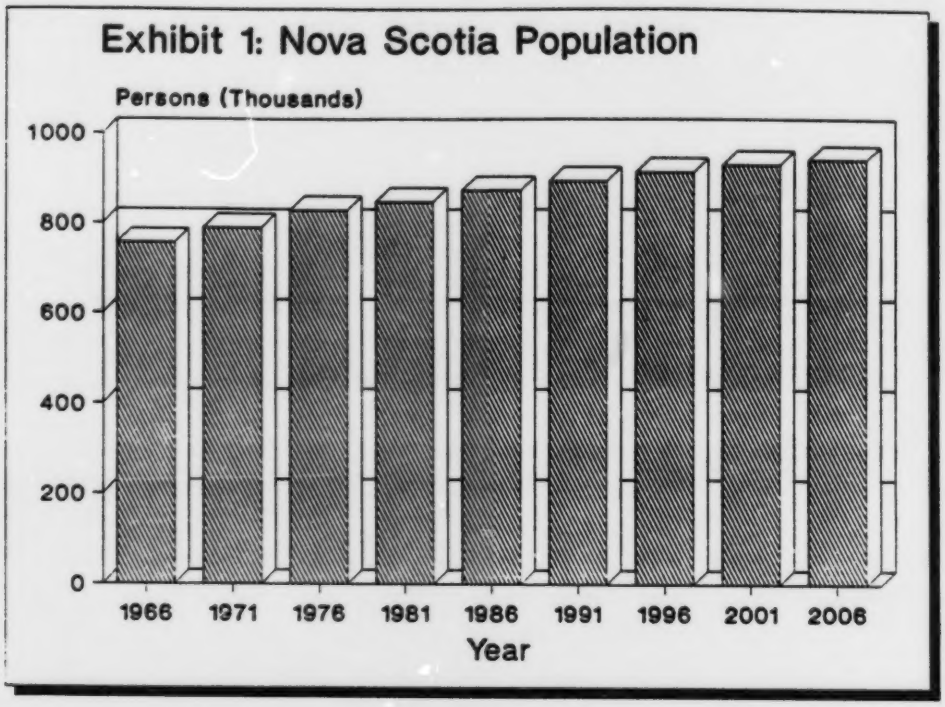
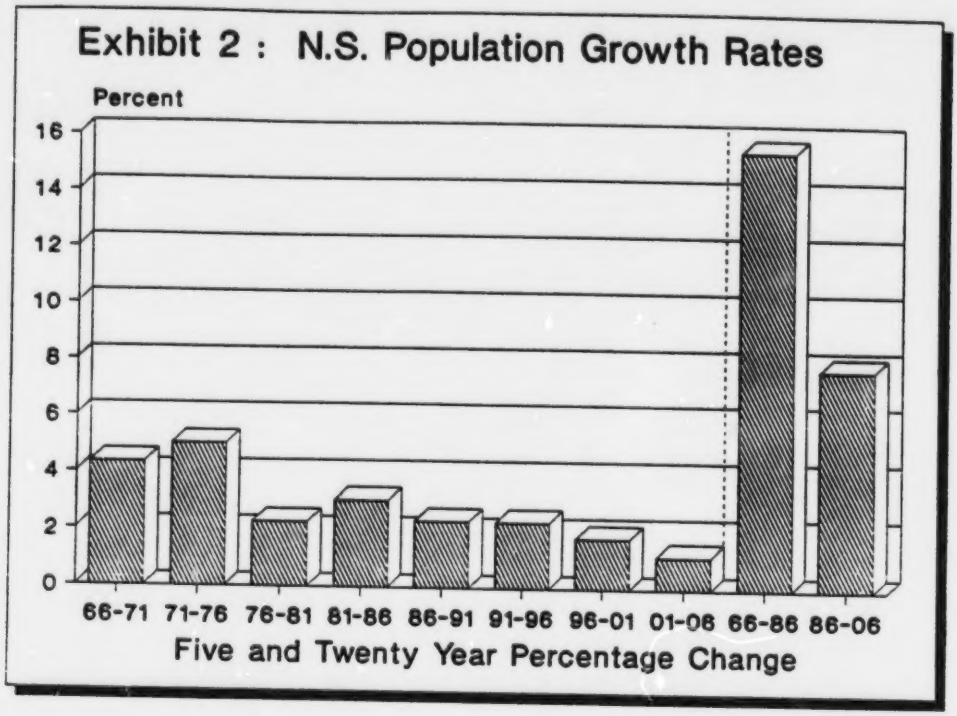



Exhibit 1 shows total Nova Scotia population for the Census years 1966-1986 and projected population at five year intervals to the year 2006.

The Provincial population rose consistently over the period 1966-1986 and is projected to continue to rise, reaching 941,000 in 2006.

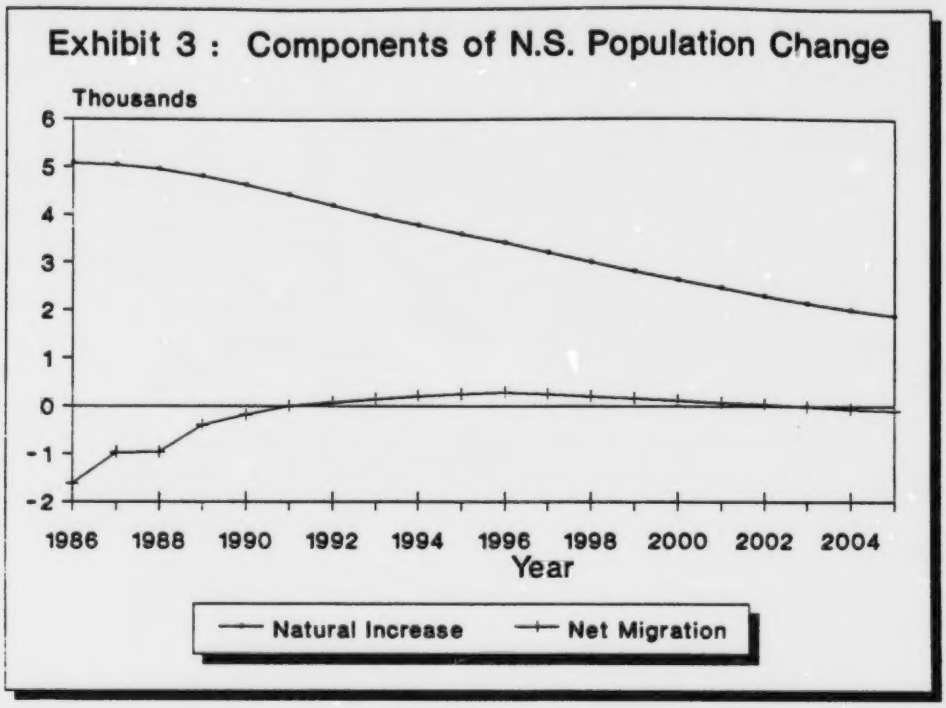
The population of 941,000 in 2006 represents a net increase of approximately 68,000 persons over 1986, an average increase of 3,400 persons per year.

Over the twenty year period 1966-1986 the net increase was 117,000 or 5,850 per year on average.




The smaller net increase over 1986-2006, relative to 1966-1986, reflects a declining population growth rate. Exhibit 2 shows that population growth rates in Nova Scotia have been on a downward trend. The projection period (1987-2006) shows a continuous decline in growth rates. The percentage change for 1986-2006 (7.8%) is roughly half that experienced over 1966-1986 (15.5%).

The annual growth rate over the period (1966-1986) peaks in 1972 at 1.22% and reaches a low of 0.25% in 1985. The annual average over the period was 0.71%. The period 1986-2006 is expected to show a peak growth rate in 1990 of 0.50% and a low of 0.19% in 2006. The annual average over this period is expected to be 0.37%.




As mentioned in Chapter 1, population growth is derived from two sources:

1. Natural increase - the difference between births and deaths; and
2. Net migration - the difference between the number of people moving into the province and the number moving out (includes international and interprovincial migration).

In the years 1986 through 1991, Nova Scotia is expected to experience negative net migration. After 1991, net migration stays slightly above zero. Consequently, migration has only

limited impact on the level of provincial population over the projection period[1].

The natural increase numbers decline over the projected period. This decline is due to a decrease in the number of births combined with an increasing number of deaths per year (see Exhibit 4).

The lower rate of natural increase is the main contributing factor to a lower net population increase over 1986-2006 relative to the period 1966-1986.

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1. An exhibit illustrating the historical net migration trend can be found in Appendix 1 (Exhibit A4 of the Technical Appendix). Exhibit A4 shows negative net migration flows for the late 60's, early 70's and early 80's. Positive net migration was experienced during the periods 1972-1975 and 1982-1984, while equal in and out migration flows were experienced during the period 1976-1978.

The positive net migration flows during 1972-1975 and 1982-1984, partially explain the peaks in population growth rates experienced during these periods, as illustrated by Exhibit 2.

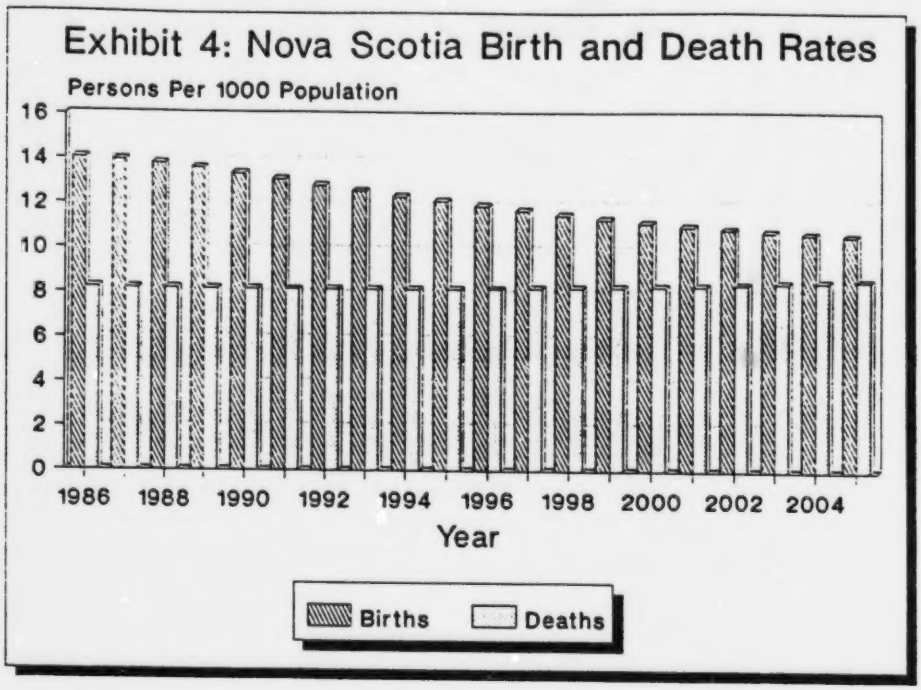



Exhibit 4 shows the crude birth and death rates (number of births and deaths per 1,000 population) rather than absolute numbers in order to remove the impact of an increasing population. Once the effects an increased population have on births and deaths are eliminated, the declining crude birth rate and increasing crude mortality rates reveal how they combine to reduce the rate of growth of the Provincial population.

Crude birth and death rates are stated in terms of births and deaths per capita. They do not directly reflect age specific birth and death rates, but are the product of age specific rates and the actual number of persons, by sex, in different age cohorts. The Technical Appendix reviews the age specific rates used in this projection series.

Birth rates, defined as the total fertility rates, have declined from 1966 to 1986. Total fertility, defined as the average number of births per woman, has declined from about 3.2 in 1966-67 to 1.6 in 1986-87. These projections assume that the 1986-87 total fertility rates hold constant to 2006.

Age specific mortality rates for the mid-aged to 65-69 year cohorts are projected to continue to decline. Hence the population is projected to "age"; that is, the proportion of population aged 65 and over increases.

The mid-1980's represent what is termed the "baby echo", where women born during the baby boom have started having children of their own. Consequently, there is a relatively higher number of births during this period. The number of births decline continuously thereafter, as illustrated by the diagram.

Corresponding to the declining number of births is an increasing number of deaths. The changes in the crude death rate are not as dramatic as the crude birth rate. It remains stable to 1998 and then increases over time narrowing the gap between births and deaths.

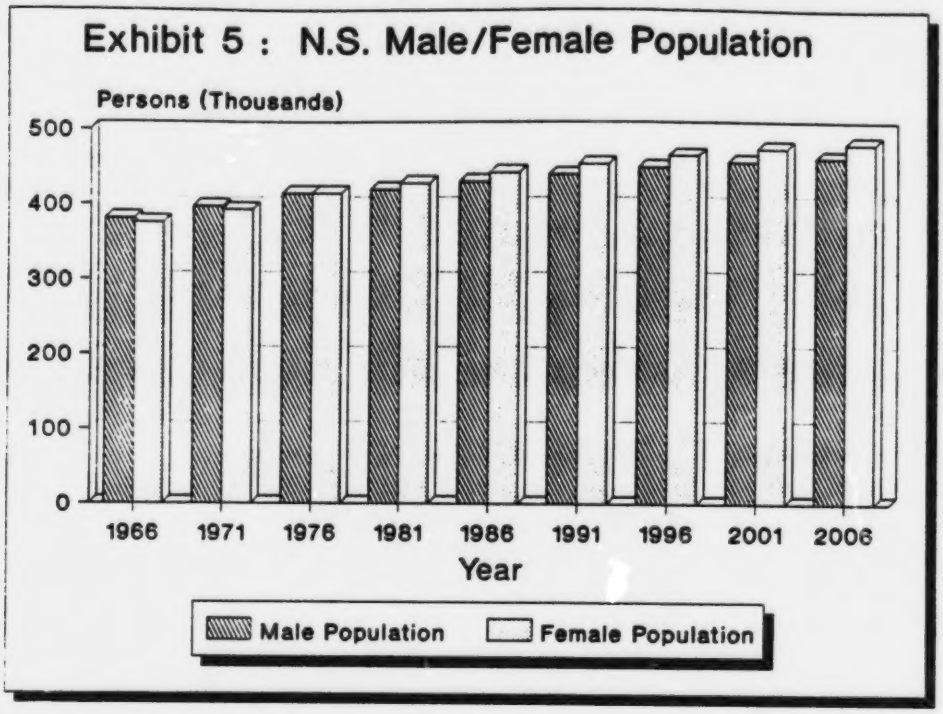
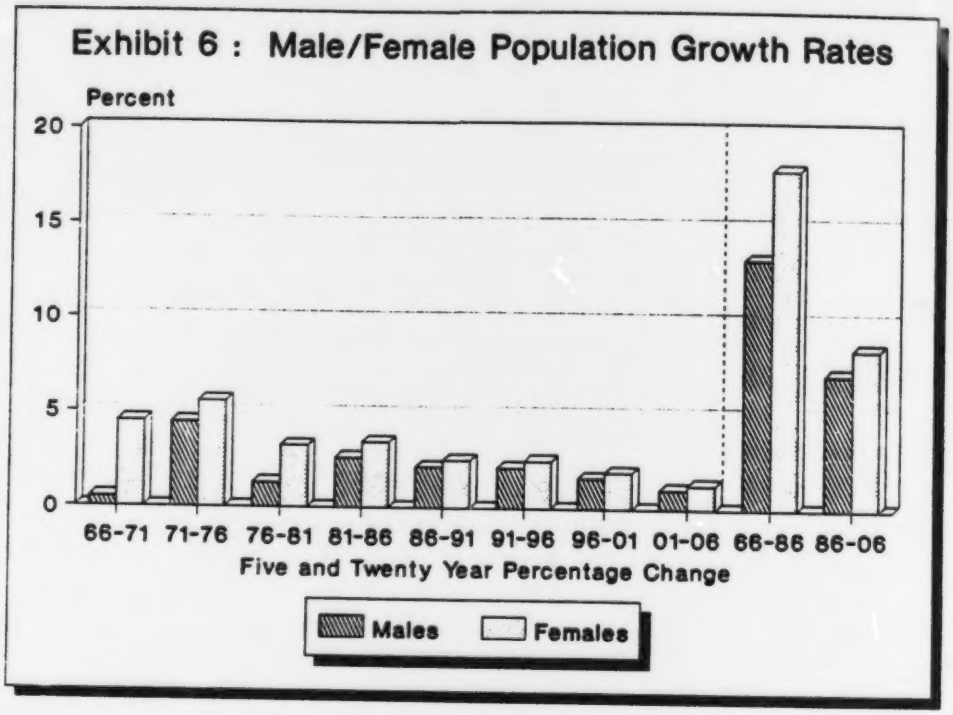



Exhibit 5 shows historical and projected male and female populations. In 1966 there were more males than females, however by 1976 they became equal. In each of the following years, the female population exceeds the male population by increasing amounts. An examination of male and female population growth rates, Exhibit 6, better illustrates the extent to which the female population growth has outpaced and is projected to continue to outpace male population growth.




Historically, the female population growth rate has exceeded the male growth rate, especially during the periods 66-71 and 76-81. Over the projected period, female growth rates continue to out pace male growth rates, but by a decreasing amount. The 20 year percentage change indicates that while male and female growth rates have decreased, the female growth rate is declining at a faster rate:

- male growth rate 1966-86 = 13% versus 7% in 1986-06, down 6 percentage points.
- female growth rate 1966-86 = 18% versus 8% in 1986-06, down 10 percentage points.

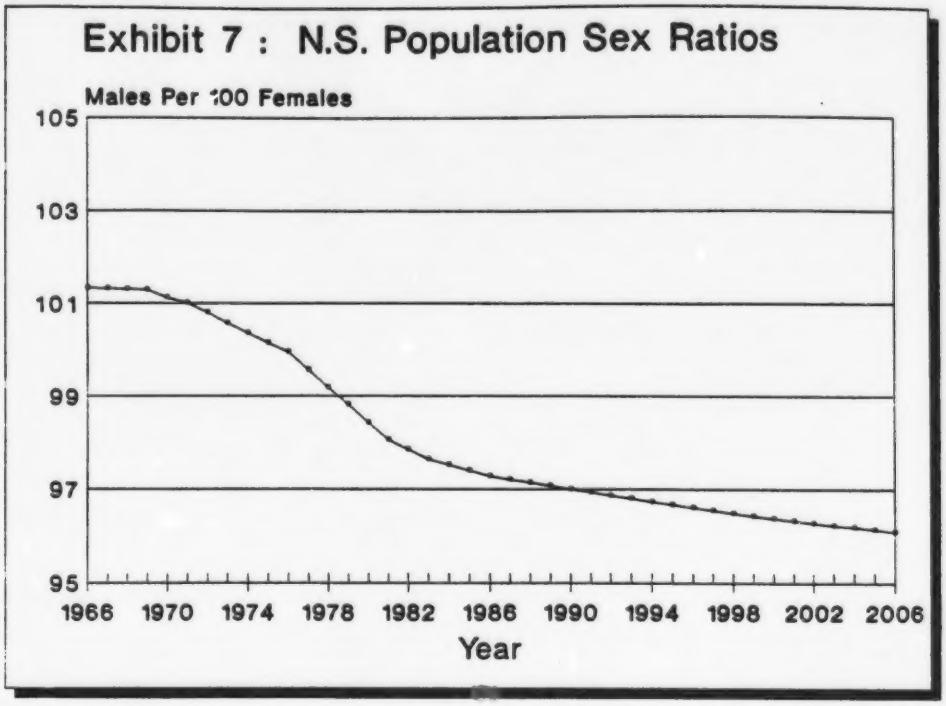



Exhibit 7 shows the Nova Scotia population sex ratios, defined as the number of males per 100 females. Because the female population grows more quickly than the male population, the sex ratio declines from over 101 in 1966 to 96 in 2006.

On average, more males are born than females. This higher birth rate is offset by higher male mortality at younger ages resulting in a relatively larger female population.

Exhibits 8, 9 and 10 illustrate sex ratios by age for 1986, 1996 and 2006 respectively. They demonstrate the effect of higher male birth rate and younger year mortality rates.

In 1986 males dominate in the early years until the 25-29 age cohort. In 1996 and 2006 males dominate all age cohorts below 30-34 and 35-39 respectively. This increasing male dominance in the younger age cohorts translates into a slower decline in the male population growth rate as previously outlined by Exhibit 6.

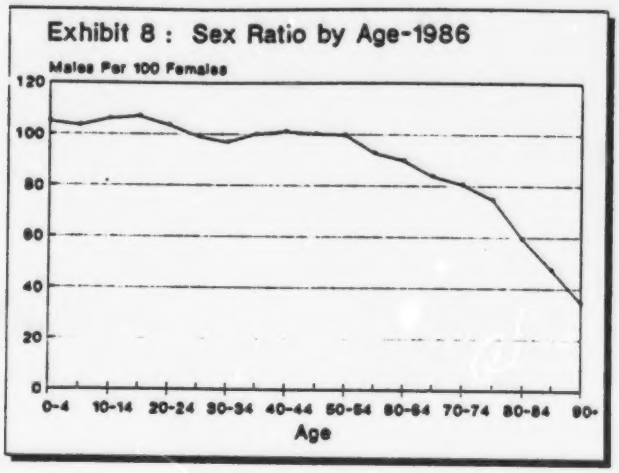


Exhibit 8 : Sex Ratio by Age-1986
Males Per 100 Females
120
100
80
60
40
20
0
0-4 10-14 20-24 30-34 40-44 50-54 60-64 70-74 80-84 90+
Age

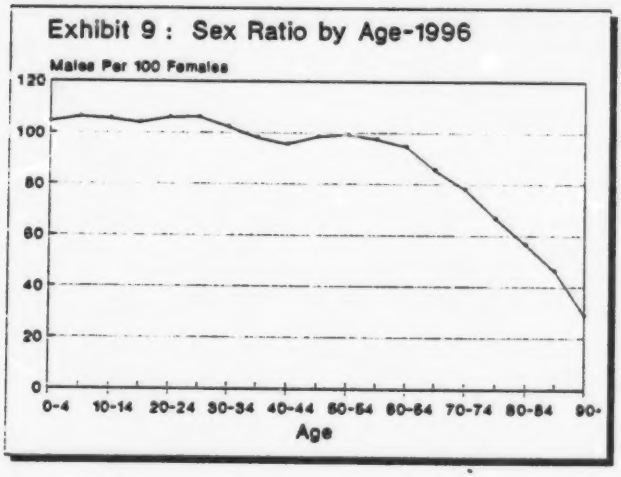


Exhibit 9 : Sex Ratio by Age-1996
Males Per 100 Females
120
100
80
60
40
20
0
0-4 10-14 20-24 30-34 40-44 50-54 60-64 70-74 80-84 90+
Age

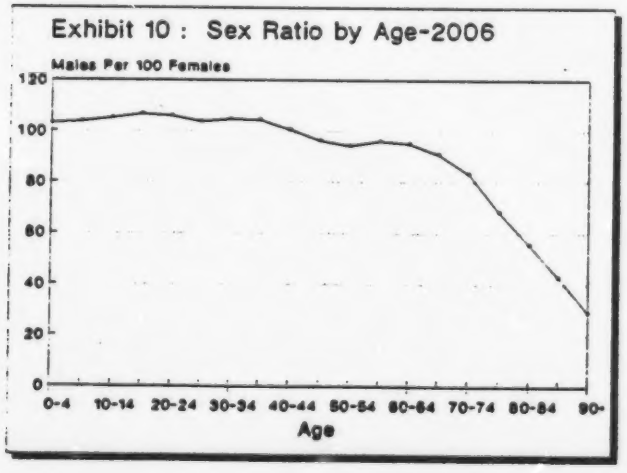


Exhibit 10 : Sex Ratio by Age-2006
Males Per 100 Females
120
100
80
60
40
20
0
0-4 10-14 20-24 30-34 40-44 50-54 60-64 70-74 80-84 90+
Age

The shift over time reflects expectations for reduced mortality rates for males in their younger years.

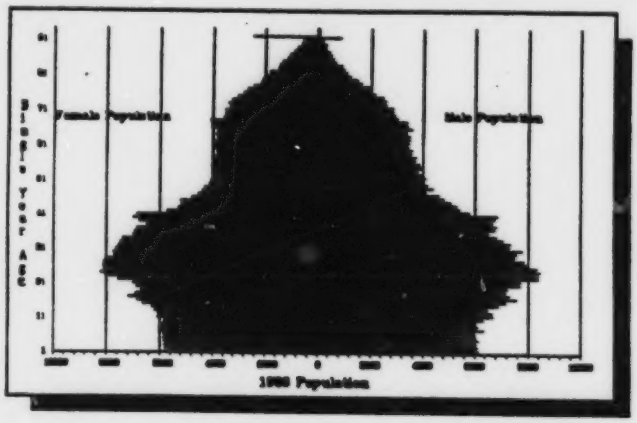
By age 50 the effects of higher male mortality rates again take effect, as is evident by the sharp decline in the sex ratio after the 50-54 age cohort.

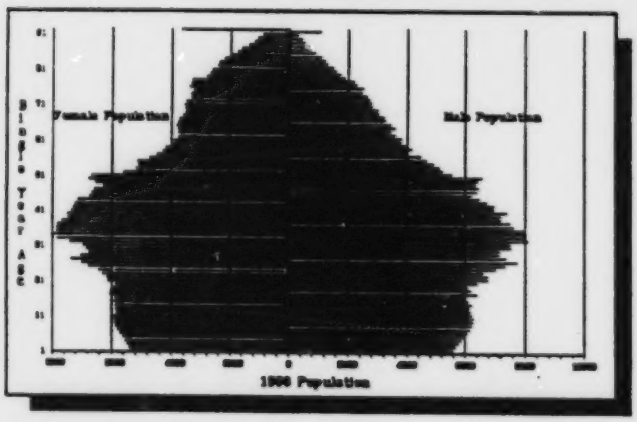
## Age and Sex Composition of the Provincial Population

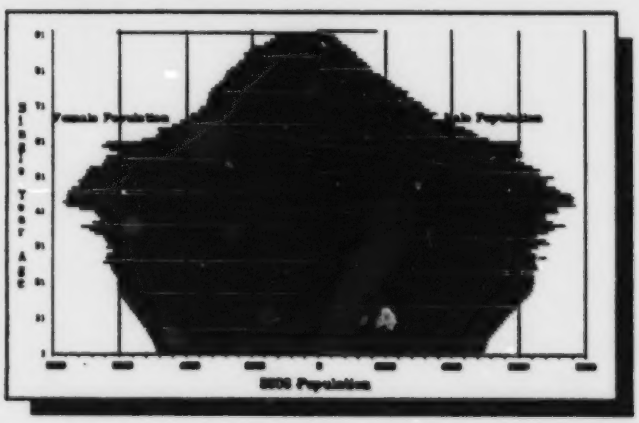
Exhibit 11 shows the changing age and sex composition of the Provincial population for three specific time periods 1986, 1996 and 2006.

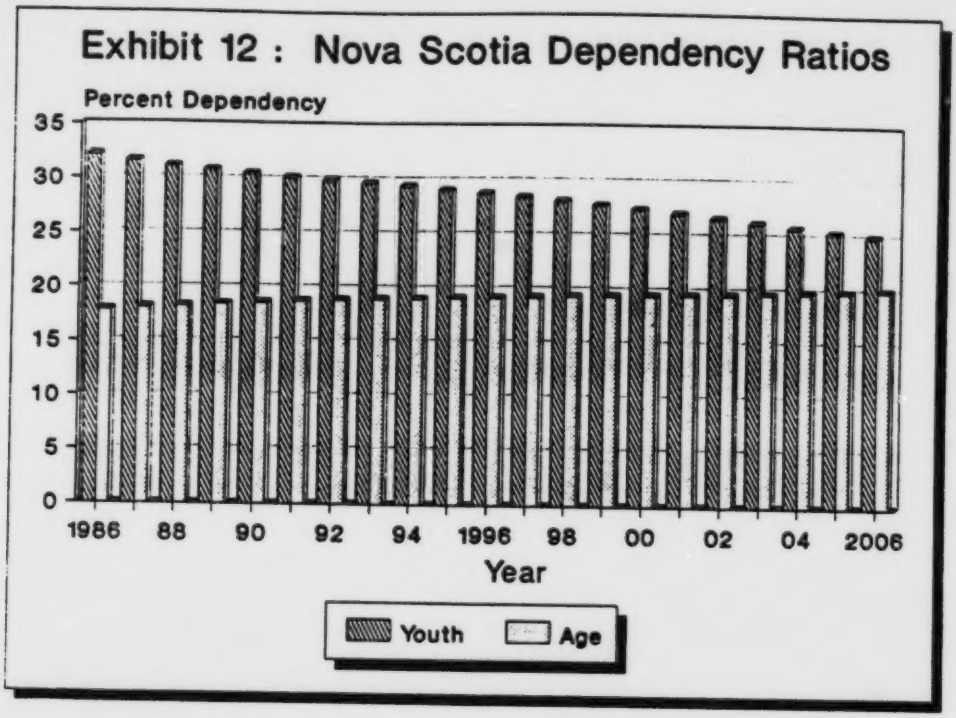
The size and shape of the "age-sex pyramids" describe the increasing size of the population, changing sex ratio and the "aging" of the population. The aging reflects the projection that an increasing percentage of the population will be in the 65 and over age cohorts.

## EXHIBIT 11: NOVA SCOTIA POPULATION BY SINGLE YEARS OF AGE









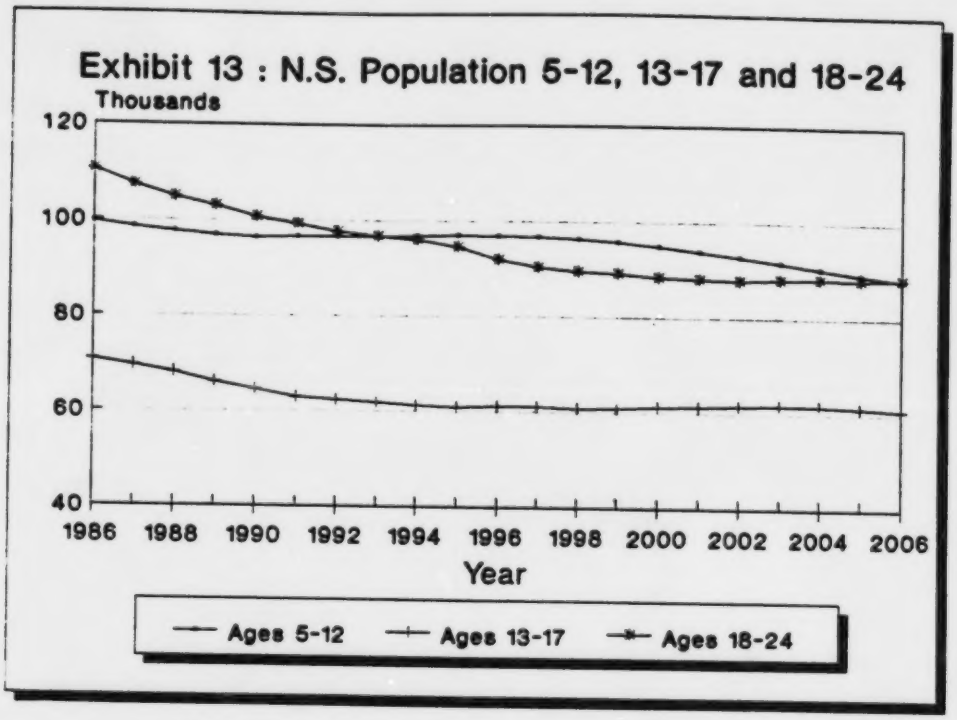

The reduced growth rate and changing age composition of the Nova Scotia population will directly influence the demand for education, health and social services. To demonstrate how these changes in age structure will impact the economy, demographers calculate two key measures of dependency:

- Youth dependency - the ratio of population aged 0-14 to the population aged 15-64; and
- Age dependency - the ratio of population aged 65+ to the population aged 15-64.

The age groups 0-14 and 65+ are defined to be out of the labour force and are therefore assumed to be "economically dependent" on the labour force population aged 15-64.

The declining youth dependency ratio is the result of the decline in the absolute number of births and an aging population.

The age dependency ratio rises as the population ages over time due to the trend to reduced mortality rates in the middle aged to mid-60's cohorts.




To provide an estimate of how the changing age structure impacts the educational system over time, three age groups can be singled out:

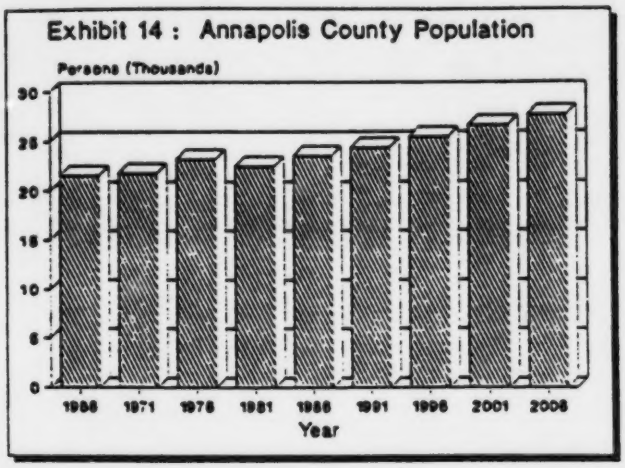
- 5-12, representing children enrolled in elementary schools;
- 13-17, for children in secondary schools; and
- 18-24, for post secondary students.

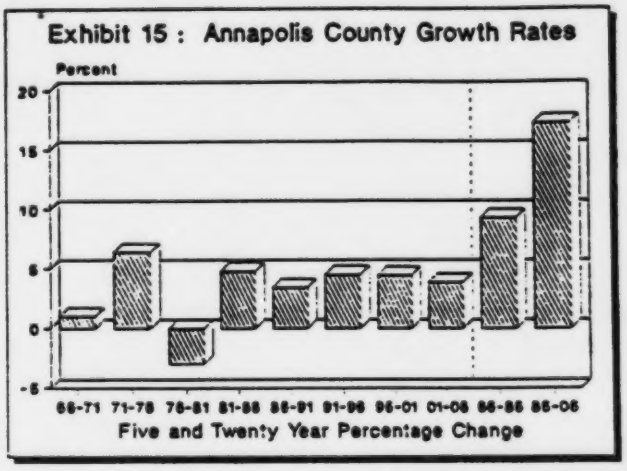
These age groups do not account for enrollment rates and therefore provide a general view of how the changing population will influence the school system.

The elementary school aged children experience a decline in the late 1980's but then remain relatively stable until the year 2000. After 2000 it is expected that the number of children in this age group will decrease continuously to 2006. The overall

The secondary and post secondary age groups tend to follow a parallel trend over the projection period. They experience decreases into the mid 1990's and then level off and remain stable to the year 2006. The 13-17 age group levels off in 1994, with an overall net decrease of 9,800 between 1986 and 2006. The post secondary age group (18-24) continues to decline until the year 1997 and then remains stable thereafter. Over the period 1986-2006, the number of post secondary aged students is expected to decrease by 22,000 persons.

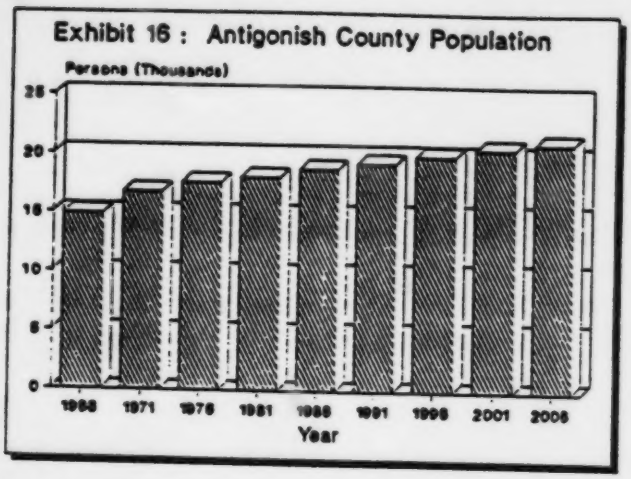
# CHAPTER 3: COUNTY AND HALIFAX/DARTMOUTH CENSUS METROPOLITAN AREA POPULATION PROJECTIONS

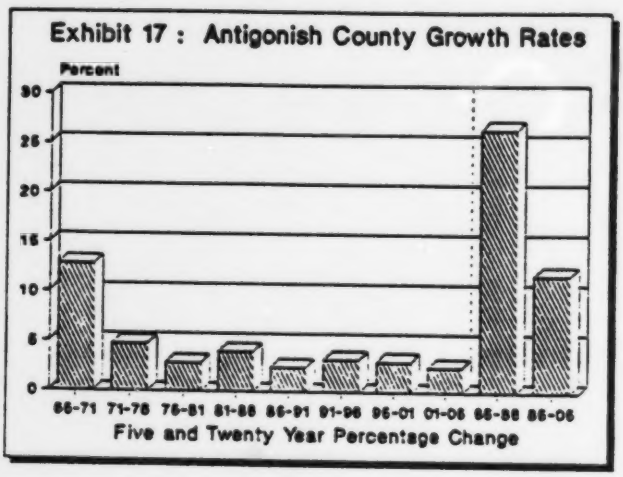



Annapolis County shows a steady increase in population historically and into the future. Historical growth rates have not been consistent, a low growth in the 66-71 period and negative growth between 76-81 correspond to an average 5 percent growth rate during 1971-1976 and 1981-1986.

Although Annapolis has the second lowest County total fertility rate at 1.50 (compared to the Provincial average of 1.58), it does have a relatively high in migration rate. Annual average net migration is projected at 155 persons per annum over the projection period. Annapolis County is one of the few counties projected to experience a larger percentage increase for 1986-2006 relative to 1966-1986.

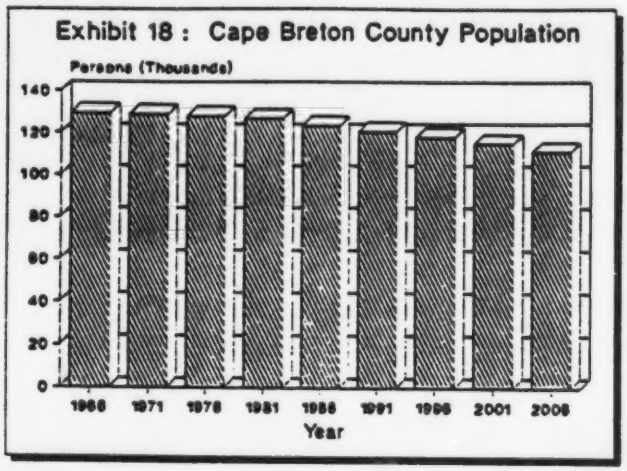


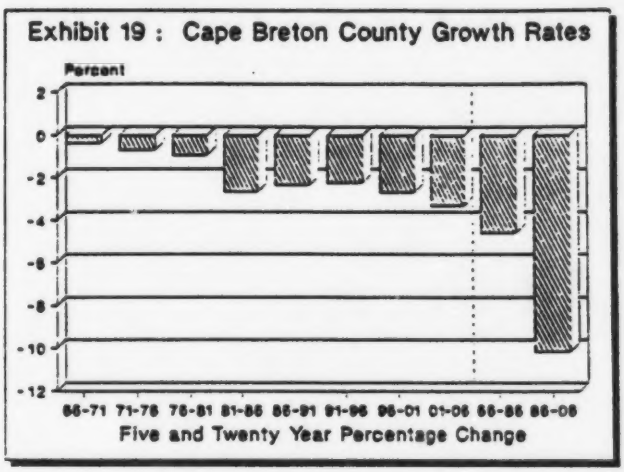




Antigonish County shows a steady increase in population, however it is increasing at a decreasing rate. The twenty year percentage change (86-06) is less than half that experienced over the twenty years 1966-1986.

It has the highest County total fertility rate at 2.14.

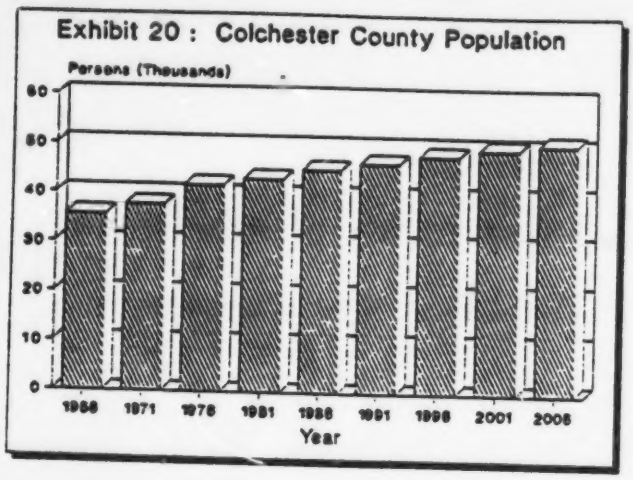
The County is projected to experience a net migration outflow of 58 persons per year on average to 2006.

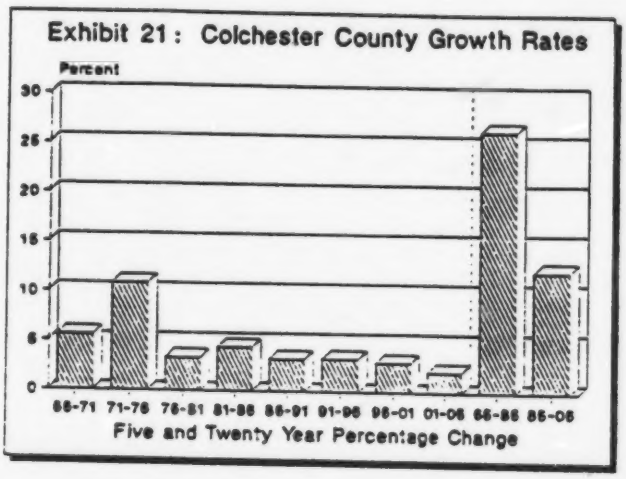


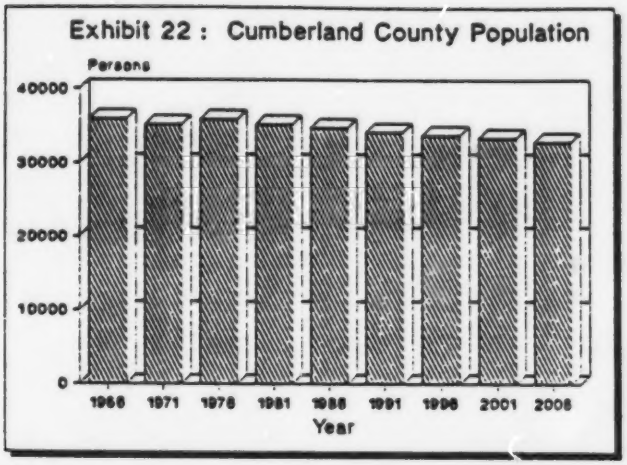

Cape Breton County is the second largest county in terms of its percentage share of the Provincial population (14.2% in 1986). Its total fertility rate (1.66) is higher than the provincial average, but because of the high out migration, the County's population has declined steadily. Net migration is projected to average -936 per year to 2006.

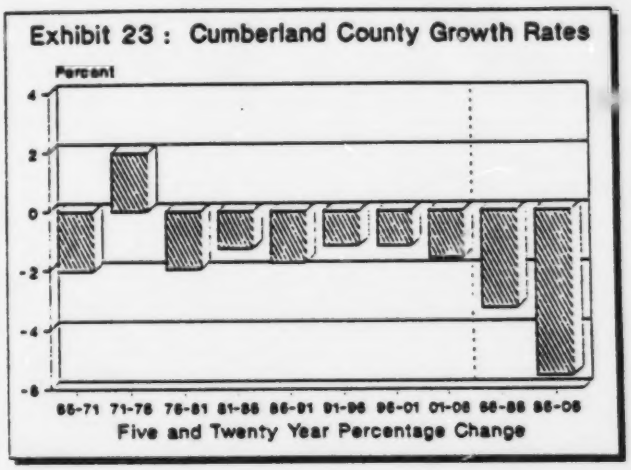
The historical data, combined with the projections suggest that Cape Breton County will experience a negative growth rate over the entire forty year period 1966 to 2006. Moreover, the population is projected to decline at an increasing rate.



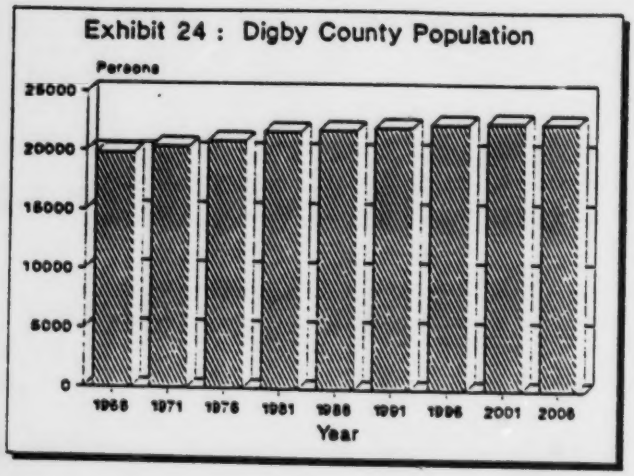

Colchester County, similar to Annapolis has a total fertility rate (1.54) below the Provincial average (1.58) and is projected to have positive net migration (146 per year on average). Unlike Annapolis County however, Colchester is not projected to grow as quickly over the projection period as was experienced during the previous twenty years.

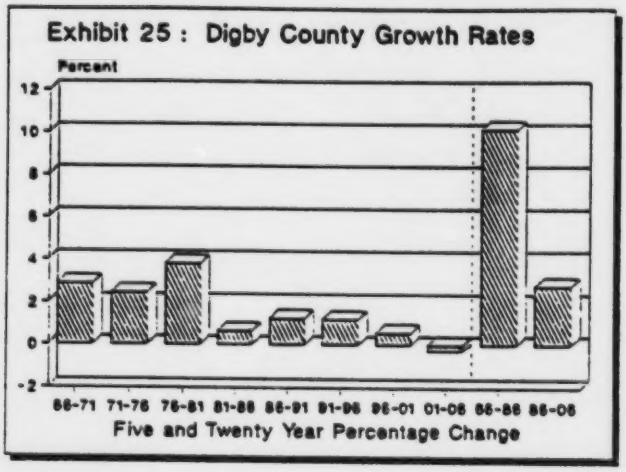



Cumberland County, like Cape Breton County, experiences a decline in population over the historical and forecast periods. Cumberland County, however, did experience one period of positive growth between 1971 and 1976.

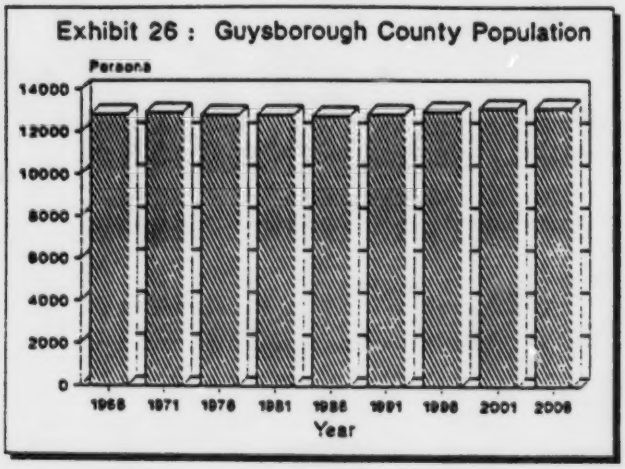
The County is projected to average 100 more out migrants than in migrants for each of the years 1986-2006. Its total fertility rate is 1.65.

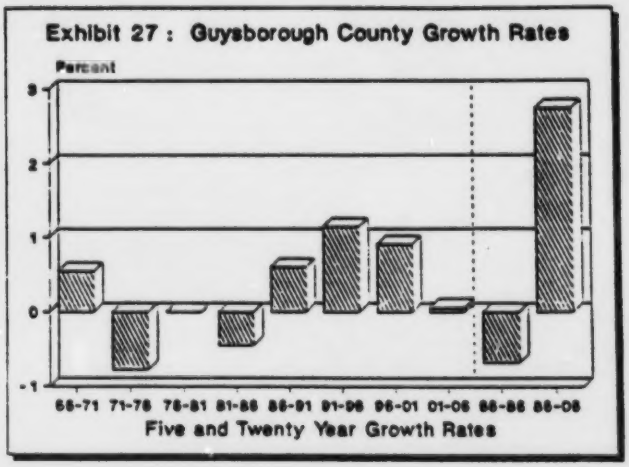



Digby County's population is projected to stay relatively stable over most of the forecast period and eventually begin to decline during 2001-2006.

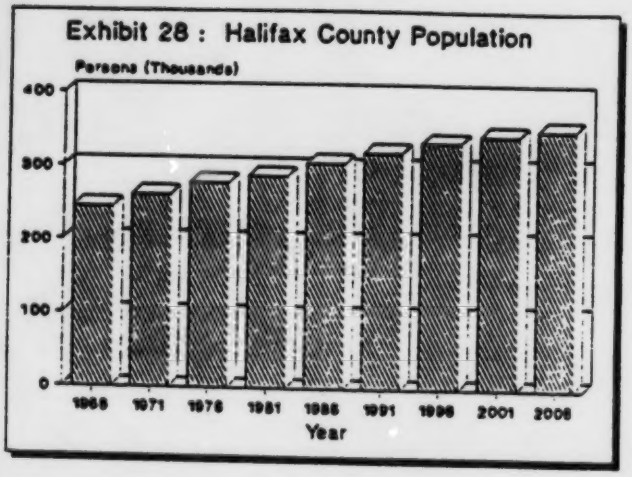
A decline in growth rates (experienced during the years 1981-1986) is projected into the future. This occurs even though the County is projected to experience positive net migration (an average 22 persons per annum). The positive net migration is not sufficient to offset a lower than average total fertility rate (1.53).

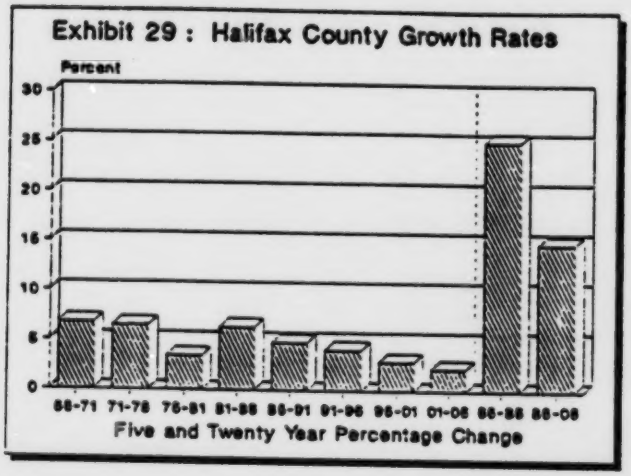



Guysborough County's population remains relatively the same over the entire period 1966-2006, showing a net gain of 400. It remains tied with Queens County as the third smallest County with only 1.5% (in 1986) of the Provincial population.

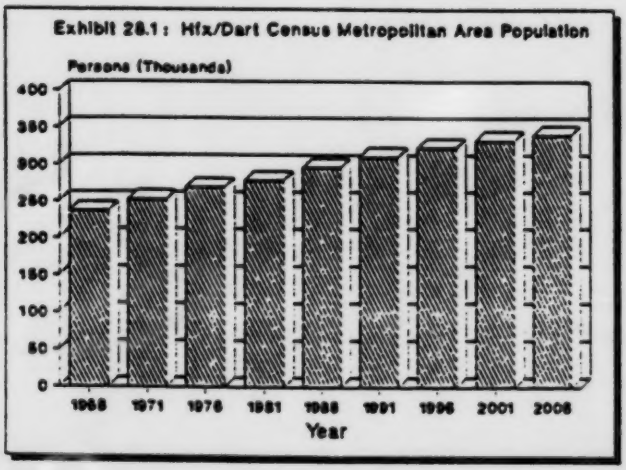
Guysborough is projected to experience an average net migration of -30 per year. It has the fourth highest total fertility rate at 1.81. The combination of high total fertility and negative net migration leads from positive population growth from 1986-01 to negative growth from 2001-06.

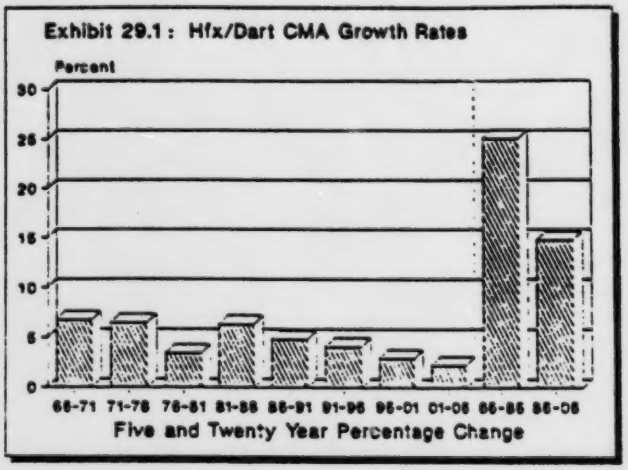



Halifax County, by far the largest county in the Province, makes up more than one third the Provincial population (35.1% in 1986).

Halifax County experiences the highest level of positive net migration at an average of 565 persons per year to 2006. This influx of people into the County more than offsets its low total fertility rate (the lowest of all counties, 1.44). Even so, its population growth fails to keep pace with past rates. Its 20 year growth rate is projected to drop from approximately 25% (1966-86) to just under 15% (1986-06)).

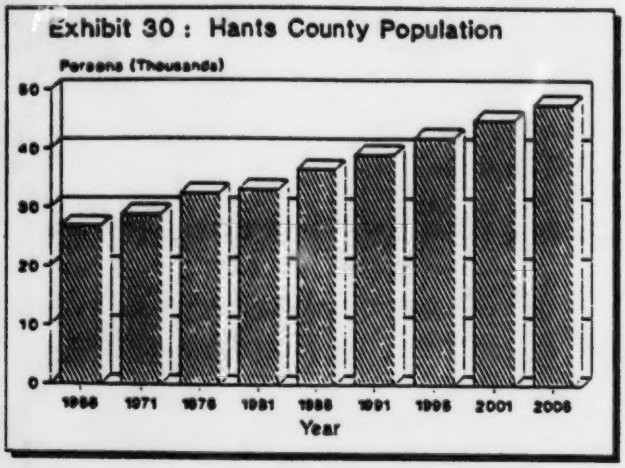


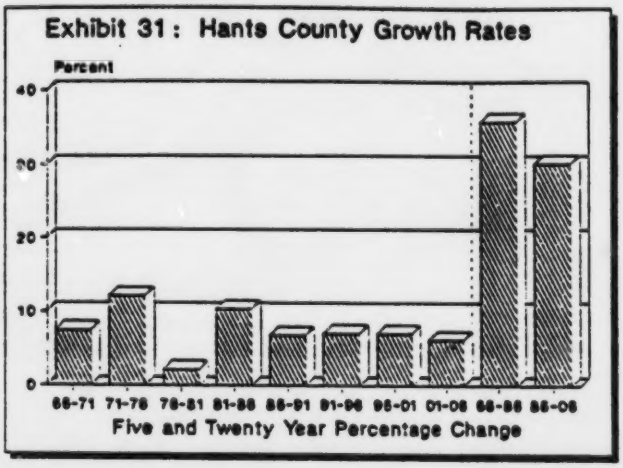




Exhibits 28.1 and 29.1 show population and growth rates respectively for the Halifax/Dartmouth Census Metropolitan Area (CMA).

The CMA boundaries changed 2 or 3 times over the period 1966 to 1986. To remain consistent, the historical populations are based according to the 1986 boundary.

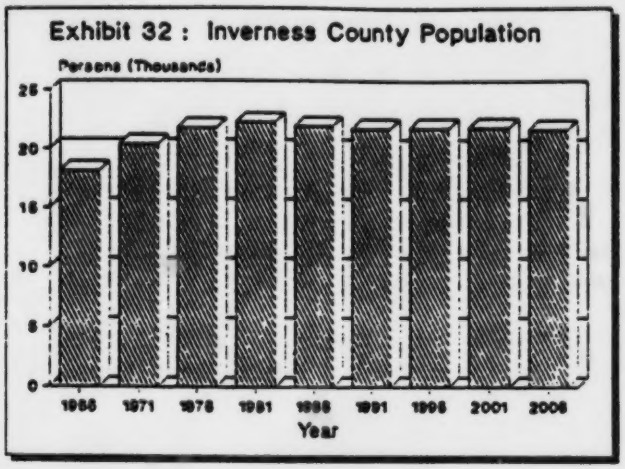
Metropolitan Halifax-Dartmouth is approximately 97 percent of Halifax County's population. Therefore, estimates of the CMA are parallel to Halifax County as they reflect a 97% share of the Halifax County projections.

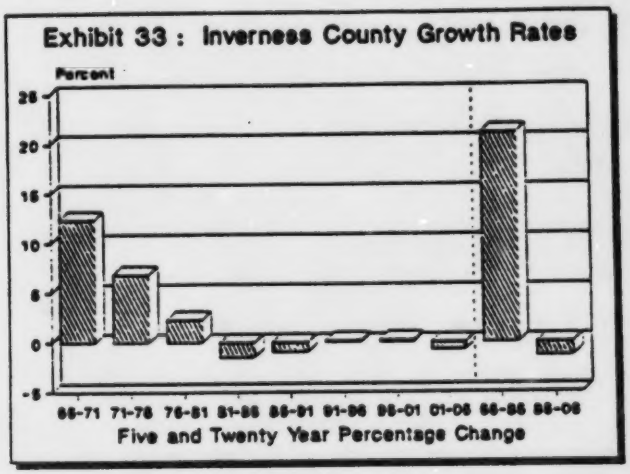



Hants maintains a strong growth rate over the entire period 1966-2006. Its twenty year growth rates are the highest at 36% (1966-86) and 30% (1986-06). Hants shows a net gain of 11,000 people (550 people per year on average) over the period 1986-2006.

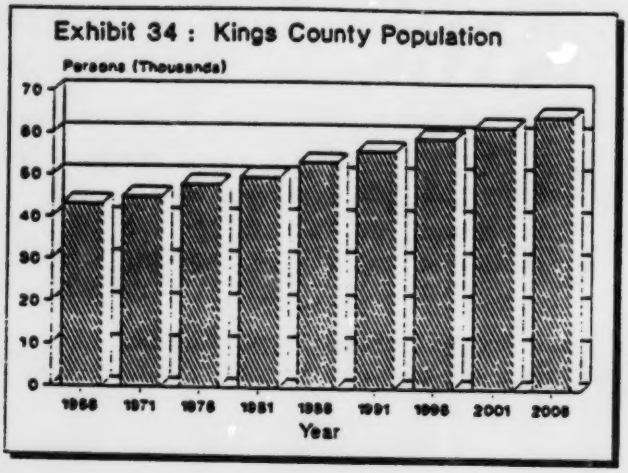
The strong population growth rates are produced by high positive net migration (an average of 303 persons per year) and an above average total fertility rate of 1.74.

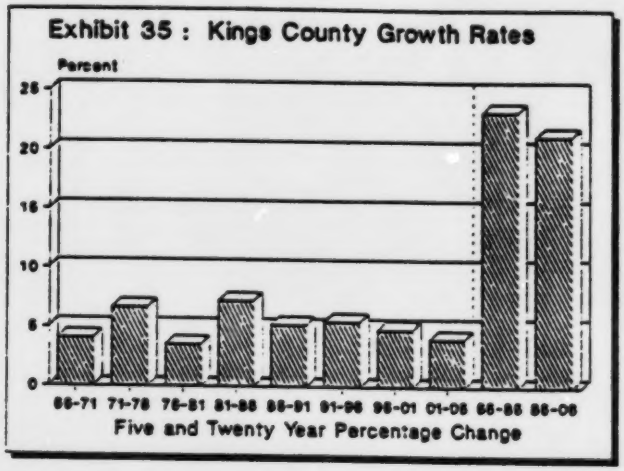



Inverness County's population increased steadily reaching a peak in 1981, thereafter the population decreased, and is projected to continue to decrease over each of the remaining periods.

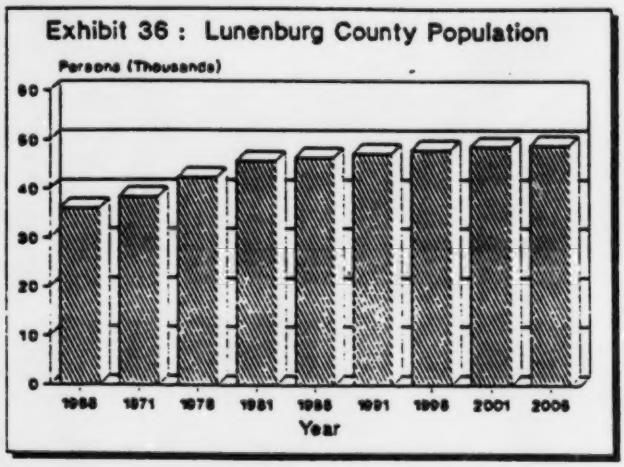
Although Inverness has a high total fertility rate of 1.94 (second highest in the Province) it is not enough to offset negative net migration flows projected to average 125 persons per year.

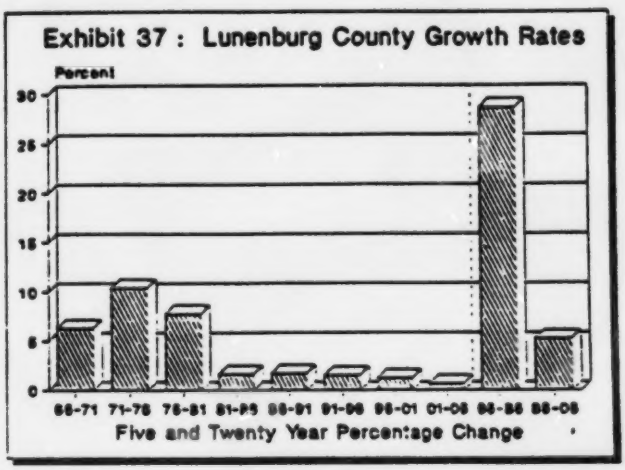



Similar to Hants, Kings County is also projected to maintain strong population growth. Its twenty year growth declines very little over the two periods.

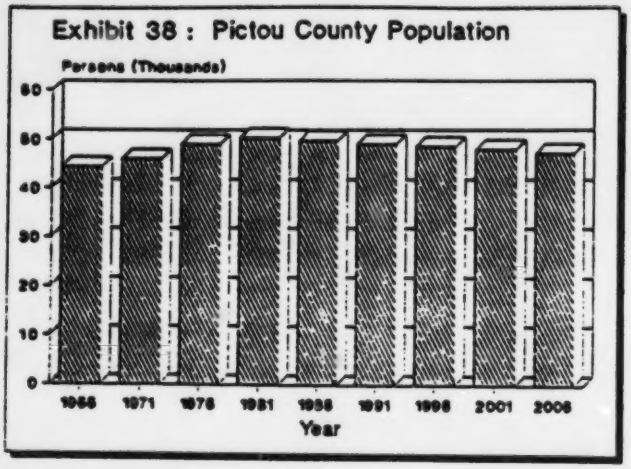
The strong growth is primarily due to positive net migration (averaging 230 persons per year). In addition, it has an above average total fertility rate of 1.72.

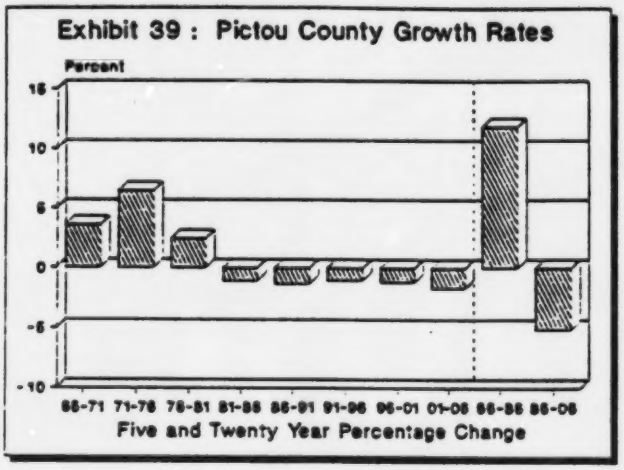



Lunenburg County, while experiencing strong population growth in the years proceeding 1981, did not experience this growth in the 1981-86 period and is not projected to grow quickly.

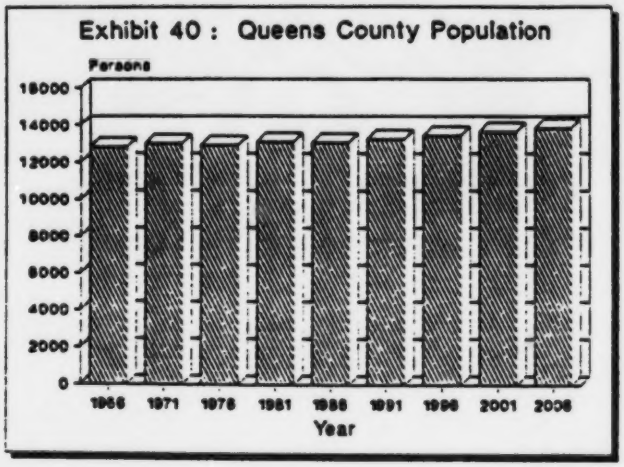
The County's population stabilizes in 1981 by combining positive net migration (averaging 70 persons each year over the projected period) with a total fertility rate that is equal to that of the Province (1.58).

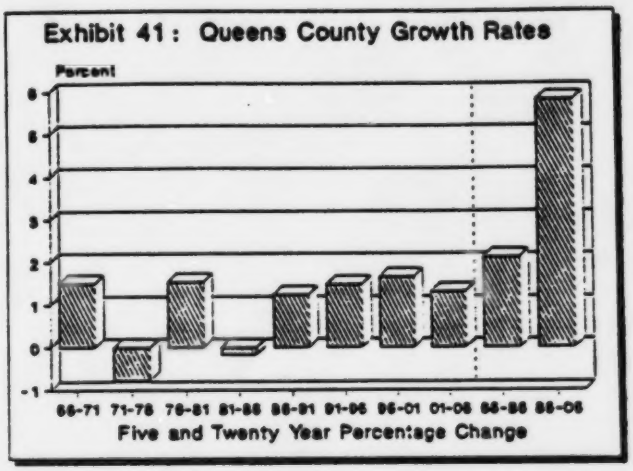



Similar to Lunenburg, Pictou experienced population growth into the early 1980's. Pictou is the fourth largest county after Kings, comprising 5.7% of the Provincial population in 1986. However, unlike Lunenburg, Pictou's growth rate turned negative as large numbers of people migrated out of the County.

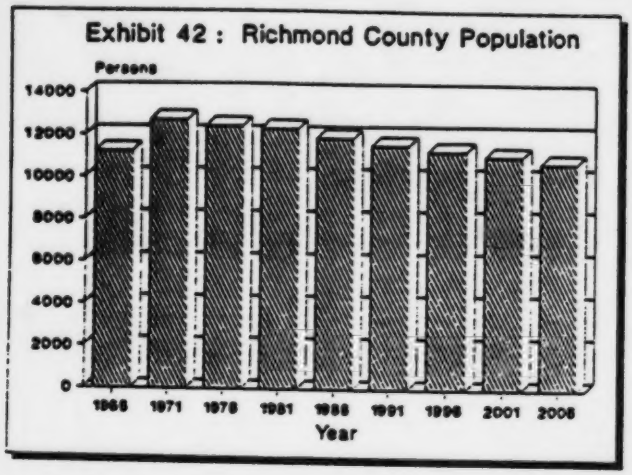
The net out migration is projected to continue (an average of -270 persons per year over the period 1986-2006). Its total fertility rate is 1.72, above the Provincial average, but is not sufficient to stem the decline in population.

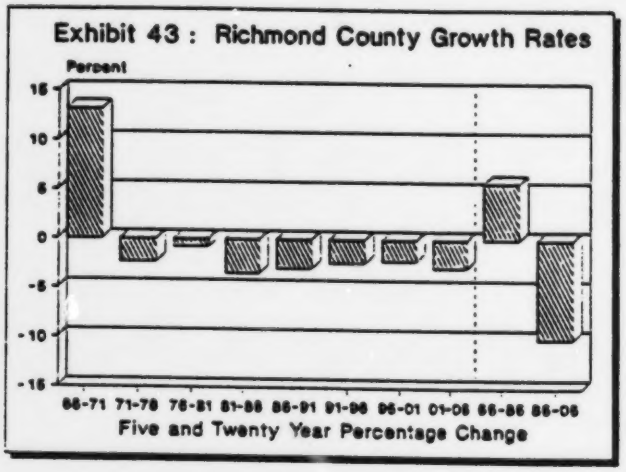


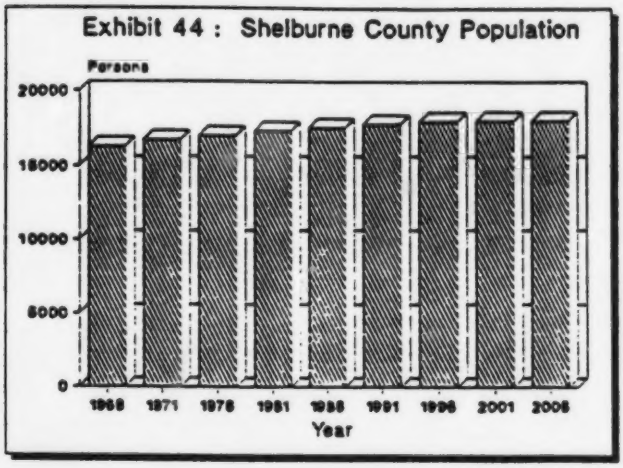

Historically, Queens County experienced volatile growth rates, positive between 66-71 and 76-81 and negative during the periods 71-76 and 81-86. Over the projection period, it is expected to have a positive growth rate for each five year period. Consequently, the 20 year growth rate over the projection period (approximately 5.6%) is greater than the previous 20 year growth rate (approximately 2.1%).

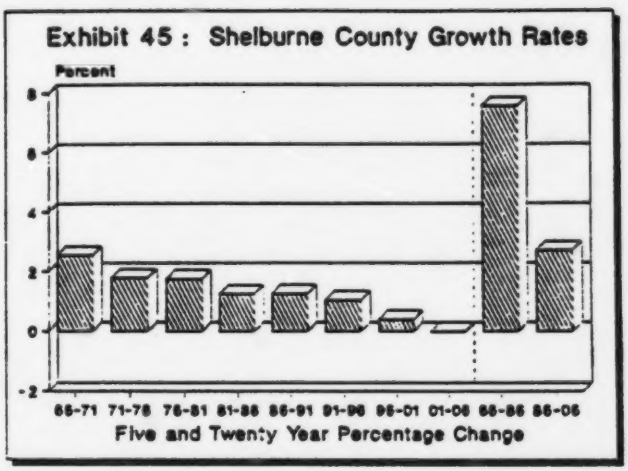
Contributing to this increased growth rate is a positive net migration of approximately 30 people per year on average and a total fertility rate equal to the Provincial average at 1.58.



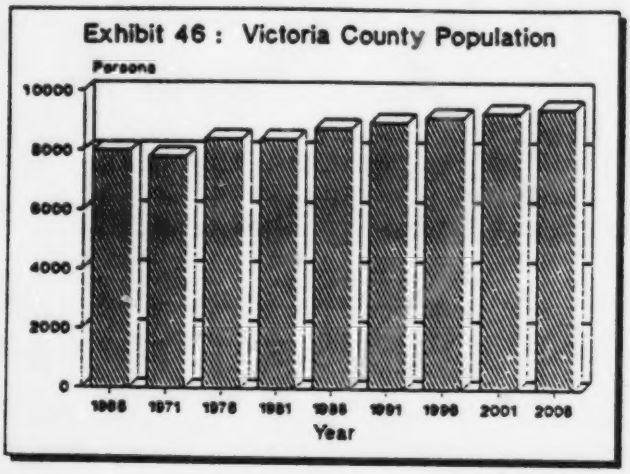

Richmond County experienced a substantial growth in its population between 1966 and 1971. In each period following, Richmond County's population decreased steadily, and is projected to continue to do so to 2006. This is primarily due to an average negative net migration of 90 in each year of the projection period. Its above average total fertility rate (1.65) is not sufficient to overcome the negative net migration.

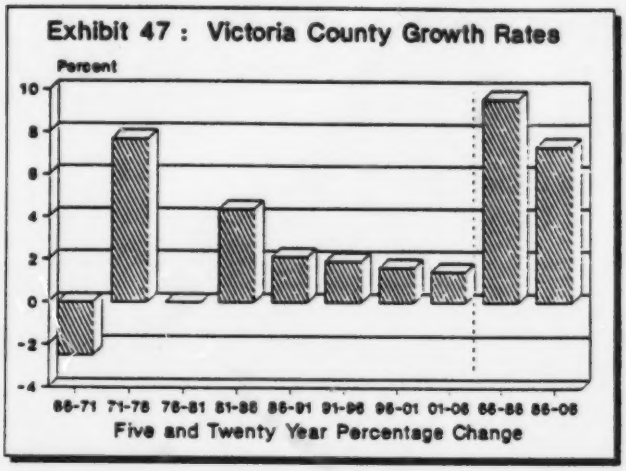



Shelburne County's population growth rate decreased from 1966 to 1981-86. Its growth rate is projected to fall continuously, eventually reaching zero growth in 2001-2006. Hence its population grows at a decreasing rate.

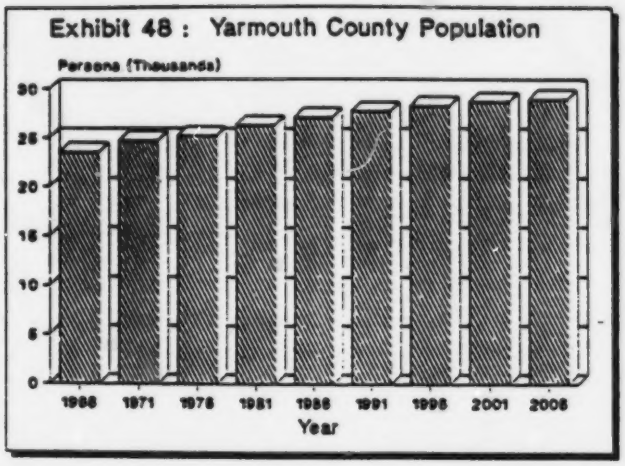
Shelburne's fertility rate is high at 1.79 but this is offset by negative net migration over the projection period (on average, 60 persons per year).

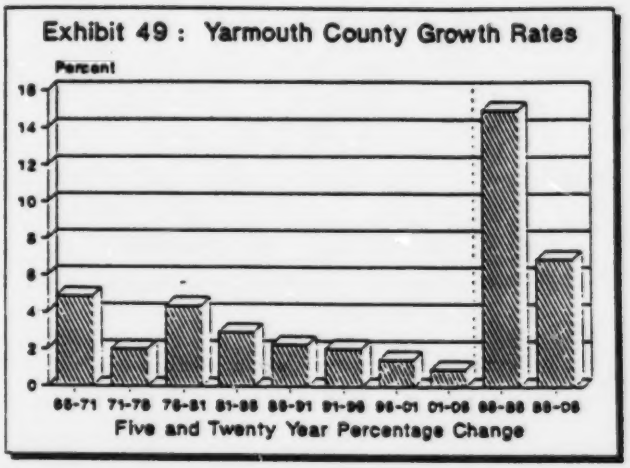



Victoria County is the smallest of the Counties accounting for only 1 percent (in 1986) of the Provincial population. It is the only County on Cape Breton Island that is expected to experience a positive growth rate over the period 1986-2006.

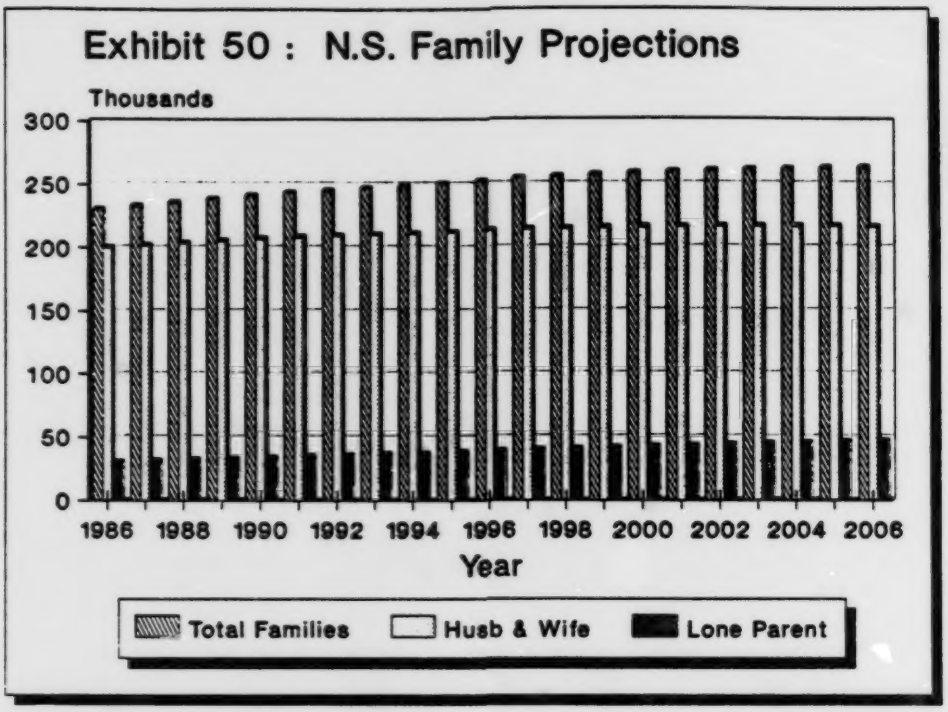
The County has the third highest total fertility rate at 1.89 and is projected to experience, on average, zero net migration for years 1986 through 2006. These two factors combine to produce modest increases in the projected population.




Yarmouth County, with a fertility rate of 1.63 and an average net in migration of 22 persons per annum, is projected to increase its population, albeit at a decreasing rate. The County experienced a growth rate of 15 percent over 1966-1986. The 20 year growth rate is projected to fall to 7 percent over the projection period (1986-2006).

# CHAPTER 4: FAMILY/HOUSEHOLD PROJECTIONS




Family projections were produced for the Province, each of the Counties and the Halifax/Dartmouth CMA. Exhibit 50 shows the projected number of families for the Province over the period 1986-2006. Detailed data for the Counties can be found in the Statistical Appendix (Exhibit B10). Separate projections are provided for husband and wife families and lone parent families.

Husband and wife families increase over the projection period but then level off and actually experience a slight decline in 2005 and 2006. The total growth rate for 1986-06 is projected to be 8%. The net increase in husband and wife families for 1986-06 is projected to be approximately 16,300.

Lone parent families increase steadily over the entire period 1986-2006 showing an average annual growth rate of 2.3%. Lone parent families grow from approximatley 30,300 in 1986 to approximatley 46,700 in 2006.

The number of total families grows by 14% over 1986-06 for an increase of approximately 33,000 families.

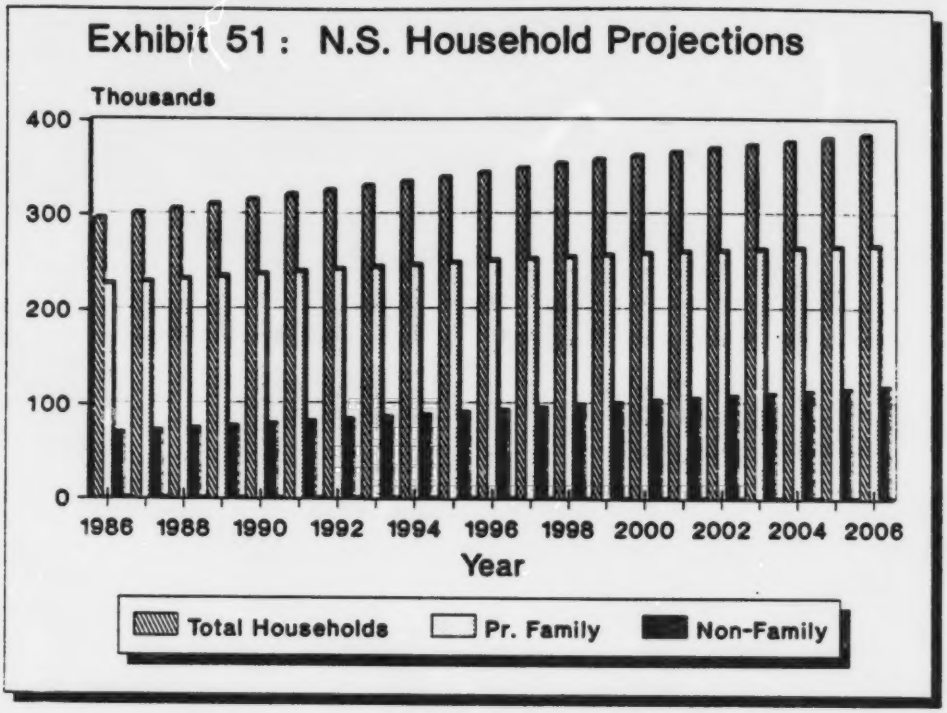



Exhibit 51 shows household projections for the Province (County and Halifax/Dartmouth CMA data are listed in the Statistical Appendix, Exhibit B10). Households projections are split according to Statistics Canada definitions:

- Primary Family Households - defined as a household in which the head of the family is also the head of the household; and

- Non-Family Households - defined as a household in which the head of the household is not the head of a family.

The total number of households is projected to increase from 296 thousand in 1986 to 385 thousand in 2006, with the main source of growth coming in the form of non-family households. Primary family households increase by 40 thousand while non-family households increase by 49 thousand over the 20 year period.

The average household size decreases from 1986 to 2006 as follows:

- 1986, 3.0 persons per household;
- 1996, 2.7 persons per household; and,
- 2006, 2.4 persons per household.

# APPENDIX A:
# TECHNICAL APPENDIX

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## 1.0 INTRODUCTION

This appendix describes the cohort survival model's structure and the major assumptions used in the base case projection of population, households, and families for Nova Scotia, its counties (census divisions) and the Census Metropolitan Area of Halifax-Dartmouth, 1987-2006.

All programming was completed using spreadsheet software on a micro-computer.

We first review the overall approach and model structure used in this project in series. We then describe the specific elements of the cohort survival model; the fertility, mortality and migration sub-models. We review first the sub-model's application in the provincial projection model and then describe the modifications made to produce county (census division) and Metropolitan Halifax-Dartmouth projections.

## 2.0 MODEL STRUCTURE

The basic model structure follows that described in the "Technical Report on Population Projections for Canada and the Provinces, 1972-2001" (Statistics Canada Publication #91-516).

The model is derived from the basic single region cohort survival model. In its simplest form this model is represented by:

$w(t+T) = [b(t,t + T) + s(t,t + T) + m(t,t + T)]\ w(t)$, where;
$w(t)$ = population at time t
$b(t,t + T)$ = birthrate from t to t + T
$s(t,t + T)$ = survival rate from t to t + T
$m(t,t + T)$ = net migration rate from t to t + T
$w(t + T)$ = population in the future

Obviously, this model is too rudimentary to produce the quality of projections required in realistic planning exercises.

Therefore, the basic model is improved by making the following enhancements:

- births and birthrates are defined for females in their child bearing years by single year of age of mother (the rates can be dynamic);

- survival rates by single year of age and sex are provided and are dynamic over time;

- migration rates are stated in gross terms (in and out); flows are defined by single year of age and sex and are defined in terms in inter-provincial and international flows (as well as intra-provincial in the county population model).

The model used in this assignment incorporates all of the above modifications.[1]

The model used in this assignment follows the structure shown below:

provincial population = Deaths (by age and sex)
+ Births (by age of mother)
+ Immigrants (by age and sex)
- Emigrants (by age and sex)
+ In-migrants (inter-provincial) (by age and sex)
- Out-migrants (inter-provincial) (by age and sex)

The county model includes in and out migrant flows between counties (intra-provincial migration), by age and sex.

Recall that the cohort survival model is composed of three sub-models, a:

- fertility;
- mortality; and
- migration sub-model.

Key parameters in each sub-model can be held constant or change over time. Alternative projections can be provided quickly and efficiently given that reasonable assumptions are available for the parameters of the sub-models.

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[1]"Situation specific" modifications to the migration model required to produce county and metropolitan Halifax-Dartmouth projections are discussed in later sections of this Appendix.

## 2.1 Provincial Cohort Survival Model

The provincial cohort survival model follows the structure described in Chapter 1 of the Statistics Canada Publication #91-516 ("Technical Report on Population Projections for Canada and the Provinces, 1972-2001").

The initial population is the 1986 Census result for provincial population by single year of age.

## 2.2 County Cohort Survival Model

In this assignment we produce population, household and family projections for each of the census divisions (counties) and Metropolitan Halifax-Dartmouth. In the county model the fertility, mortality and migration sub-models are calibrated to reflect the gross rates of fertility, mortality and migration, by sex, in each of the counties. However, the overall model design for this assignment requires that the sum of individual county birth, death and migration (by sex) projections must equal the provincial model's total birth, death and migration projections (by sex). The projections for each sub-model are summed each year over the counties. The sum for each sub-model is compared against the provincial projection and adjustments, up or down, are made on a pro-rata basis. That is, provincial sub-models' results are used as the control totals.

The county model was initialized with single year of age population (by sex) data and were drawn from the 1986 Census publications. However, the total did not exactly match the published provincial total, due to random rounding at the county (census division) level. Each county's 1986 population was adjusted downward very slightly (0.006%) to ensure identity with the published provincial total in 1986.

## 2.3 Metropolitan Halifax-Dartmouth Model

Metropolitan Halifax-Dartmouth is approximately 97 percent of the population of Halifax County. Therefore, throughout the assignment, estimates for metropolitan Halifax-Dartmouth demographics reflect a 97 percent share of the Halifax County projections.

## 3.0 FERTILITY SUB-MODEL

Births are a function of the size of the female population of childbearing age and the propensity to bear children. Rather than estimating an annual average fertility rate for women in each year of their childbearing years (in 1986) and projecting those rates to the future a three parameter fertility sub-model was calibrated for this assignment. The fertility sub-model is described in Chapter 2 of Statistics Canada's Publication #91-516, referred to earlier in this report. The sub-model is stated simply as:

$$N_t = \sum_{i=a}^{b} P_{i,t} F_t p_{i,t}, \text{ where}$$

N = number of births

P = number of women

F = total fertility rate

p = proportional distribution of the total fertility rate, by age

i = age cohort

t = time

a = upper boundary of the childbearing years

b = lower boundary of the childbearing years

The total number of births expected over the childbearing years of the average women is distributed over the childbearing years. The distribution is described by a curve that approximates the shape of a Type I curve developed by K. Pearson. This curve resembles a bell shaped curve with its peak positioned over the modal age of childbearing. The functional form of this equation is shown on Page 40, of Statistics Canada Publication #91-516 in Chapter 2. The final form of the fertility model used in this projection series, shown in equation #17 on Page 42 of Chapter 2, Publication #91-516, is as follows:

$$N_t = \sum_{i=\alpha}^{\beta} \left\{ P_{i,t}.F_t. \left[ \frac{\left(1+\frac{x_i}{a_1}\right)^{m_1}\left(1-\frac{x_i}{a_2}\right)^{m_2}}{\sum_{x_i=-a_1}^{a_2}\left(1+\frac{x_i}{a_1}\right)^{m_1}\left(1-\frac{x_i}{a_2}\right)^{m_2}} \right] \right\} \quad ; \text{ where}$$

N – number of births.

P – number of women,

F - total fertility rate,

i – specification of age-group.

t – time.

$\alpha$ – lower bound of reproductive period.

$\beta$ – upper bound of reproductive period.

$$m_2 = \frac{[\delta - M_{0t} - \alpha)]\{\alpha - [2(A_t - \alpha)]\}}{\delta[(A_t - \alpha) - (M_{0t} - \alpha)]}$$

$$m_1 = \frac{(M_{0t} - \alpha)\{\delta - [2(A_t - \alpha)]\}}{\delta\,[(A_t - \alpha) - (M_{0t} - \alpha)]} \quad ; \text{ where}$$

$M_0$ = modal age of fertility

A = mean age of fertility

$$a_2 = \delta - a_1 = \delta - (M_0 - \alpha)$$

$$a_1 = M_0 - \alpha$$

The fertility model is calibrated by entering three key parameters:

- the total fertility rate (that is, the average number of births per women during her childbearing years);
- the mean age of fertility (that is the average age of mothers at birth);
- the modal age of fertility (that is, the single year cohort showing the largest number of births).

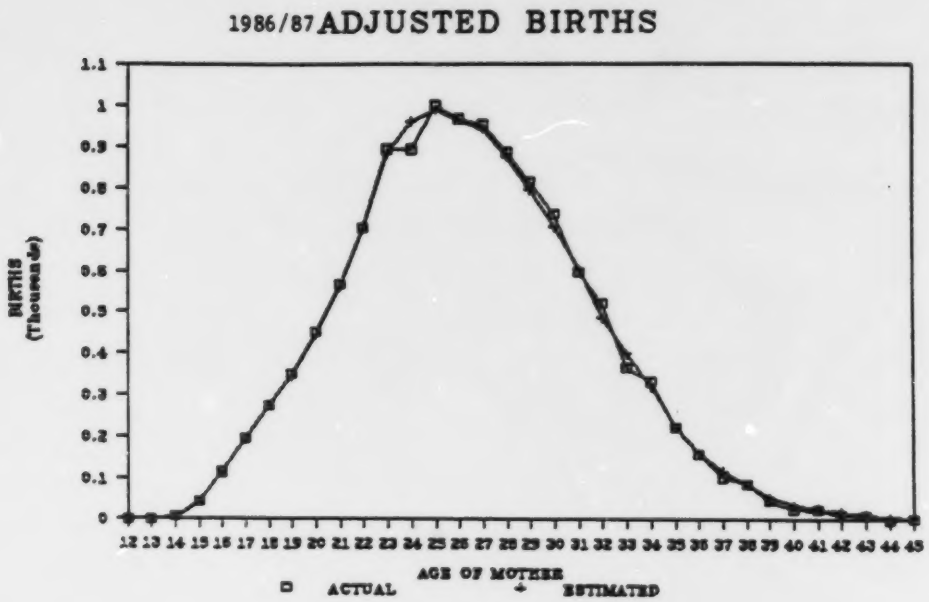
To complete the calibration of the model the maximum and minimum childbearing year boundaries must be specified.

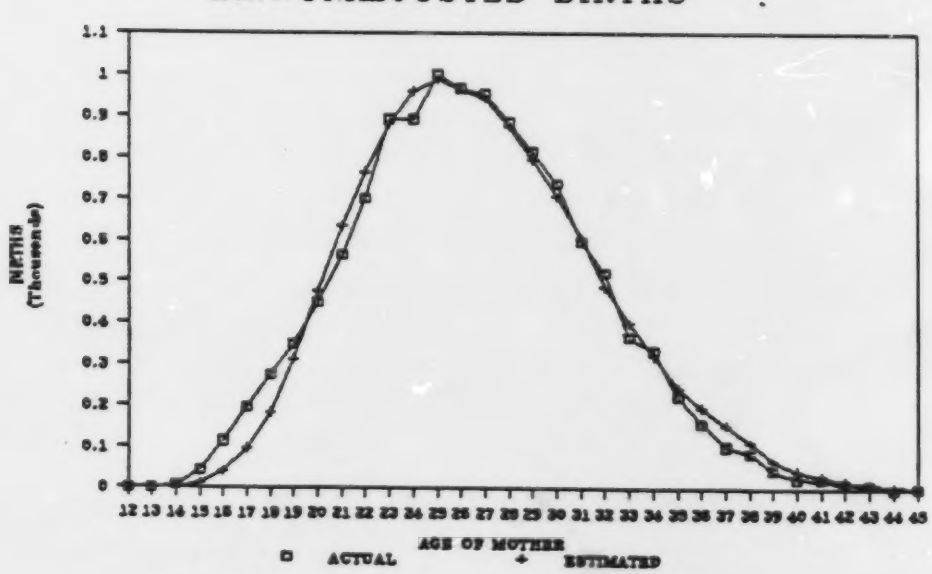
For this assignment we use the actual data for the June 1, 1986 to May 31, 1987 "census" year. The key assumptions for the model of Nova Scotia fertility are as follows:

- total fertility rate, 1.58;
- mean age of mothers, 26.41 years; and
- modal age of mothers, 26 years.

To check and "fine tune" the model we "projected" births for the 1986-87 period by applying the June, 1986 female population to the fertility model. Projected births by age of mother were compared against actual statistics. The initial model showed a slight under projection for 14 to 19 year olds, a slight over projection for 20 to 22 and 35 to 42 year olds. These under and over projections were easily solved by shifting the slopes of the curve slightly. However, the 1986 actual total fertility rate, mean and modal data were retained in the fertility sub-model. Exhibit A1 shows the model's unadjusted and adjusted projections for 1986-87.

## EXHIBIT A1: FERTILITY MODEL RESULTS, 1986-87



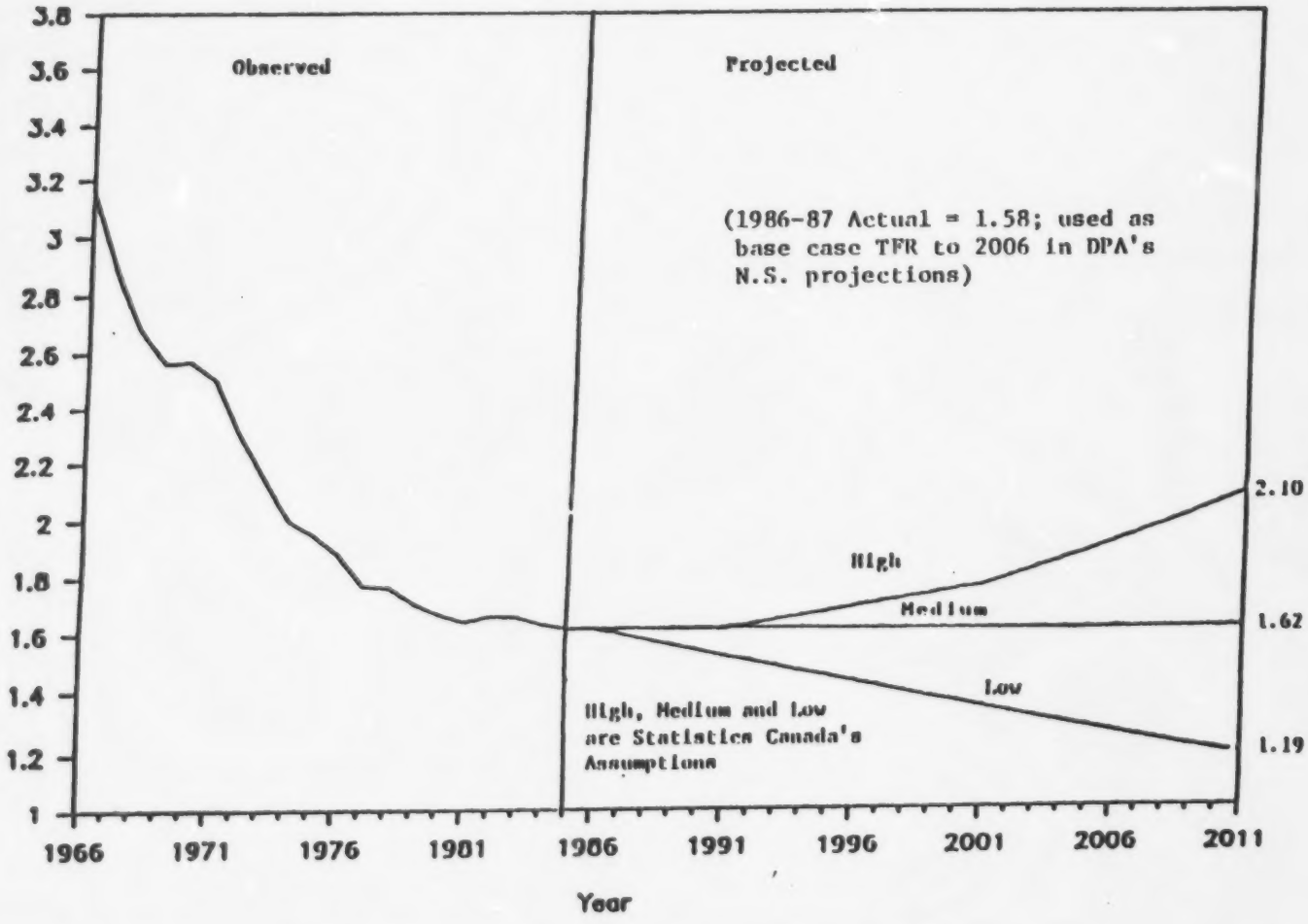
For the base case population projection we assumed that the total fertility rate would remain at 1.58 to end of the projection period. This compares with Statistics Canada's 1.62 mid-range assumption used in its 1986 Census based Canadian and provincial projections. They also provide scenarios describing a high total fertility (total fertility rate rising from 1.62 in 1986 to 2.1 by 2011) and a low assumption (total fertility falling from 1.62 in 1986 to 1.19 in 2011). Exhibit A2 shows the historical and projected trends of Statistics Canada and DPA.

### 3.1 County Fertility Sub-Model

In order to calibrate a fertility sub-model for each county the 1986 Census population for each county was applied to the provincially calibrated fertility sub-model. The total estimated births were compared to the actual data for each county. The total fertility rate was then adjusted upwards or downwards so that the total estimated births in a county during 1986-1987 matched the actual number. This method of adjustment ensured that initially the sum of births, by age of mother, by county would sum to the provincially projected total. The adjustment process does not change the shape of the fertility distribution curve it merely shifts the curve upward or downward to reflect the county total fertility rate rather than that of the province. The minimum and maximum age of fertility and the mean and modal age of mother remain unchanged from the provincial sub-model. This simplifying assumption enabled us to provide a fertility model that would project births, given consistent population projections, at the county level that would sum over all counties to match the provincially projected total.

The 1986 total birth rate adjustment factors for each county were held constant to the year 2006. This implies that the trends assumed for the provincial total fertility would be paralleled by the county total fertility rates. There is no conversion or

EXHIBIT A2: TOTAL FERTILITY RATE FOR NOVA SCOTIA, 1966-1985 (OBSERVED) AND 1986-2001 (PROJECTED)




SOURCE: The 1986 Census Based Population Projections for Canada Provinces and Territories: Assumptions and Final Results; (mimeographed) Statistics Canada, June 1988 and The DPA Group Inc.

divergence of county and provincial total fertility rates assumed during the projection period.

## 4.0 MORTALITY SUB-MODEL

Mortality projections for Nova Scotia, by single year of age and sex, for the years 1986-2006 were purchased from Statistics Canada, Demography Division, Population Projections Section.[2] These projections reflect the assumptions used in the latest 1986 Census based Statistics Canada population projections. The time series of mortality rates incorporates the following assumptions:

- life expectancy at birth
  - female 1986, 79.6 years
    2006, 83 years
  - male 1986, 72.2 years
    2006, 75.7 years

- life expectancy at 65 years
  - female 1986 (estimated by DPA), 18.7 years
    2006 (estimated by DPA), 20.9 years
  - male 1986 (estimated by DPA), 14.4 years
    2006 (estimated by DPA), 15.8 years

- life expectancy at 75 years
  - female 1986 (estimated by DPA), 11.7 years
    2006 (estimated by DPA), 13.6 years
  - male 1986 (estimated by DPA), 9.0 years
    2006 (estimated by DPA), 9.8 years

---

[2]Unpublished data.

- percentage distribution of changes in life expectancy;
  - females

| age | 1986-91 | 2001-2006 |
|---|---|---|
| 0-19 | 4.3% | 2.0% |
| 20-44 | 8.2% | 5.5% |
| 45-64 | 13.5% | 10.6% |
| 65+ | 74.0% | 81.9% |
| Total | 100.0% | 100.0% |

- males

| age | 1986-91 | 2001-2006 |
|---|---|---|
| 0-19 | 4.7% | 3.0% |
| 20-44 | 12.5% | 11.2% |
| 45-64 | 25.6% | 24.6% |
| 65+ | 57.2% | 61.2% |
| Total | 100.0% | 100.0% |

The distribution of changes in life expectancy shows that the assumption is that the oldest age group will gain the most in terms of life expectancy. This reflects the fact that the younger age groups are very near to 100 percent survivability between cohorts. The net result is that the population begins to age and older age groups begin to account for increased proportions of the provincial population.

We applied the 1986 survival rates to the 1986 provincial population by single year of age and sex. We then compared the "projections" of male and female deaths (in total and by eight different cohort groups; 0-9, 10-19, 20-29, 30-39, 50-59, 60-69, 70-79 and 80+) with actual data.

No significant deviations between the projected and actual data were noted. The male survival rates tended to over predict deaths slightly. Therefore all male survival rates were slightly adjusted (less than 1%) to reduce the over projection of deaths.

Female deaths were slightly under predicted. Therefore, survival rates were adjusted slightly (less than 1%) to raise projected female deaths to match the actual for 1986.

The adjustment factors were maintained throughout the projection period. The overall trends were unchanged. Exhibit A3 shows the provincial mortality trends, 1988-2006.

### 4.1 County Mortality Sub-Model

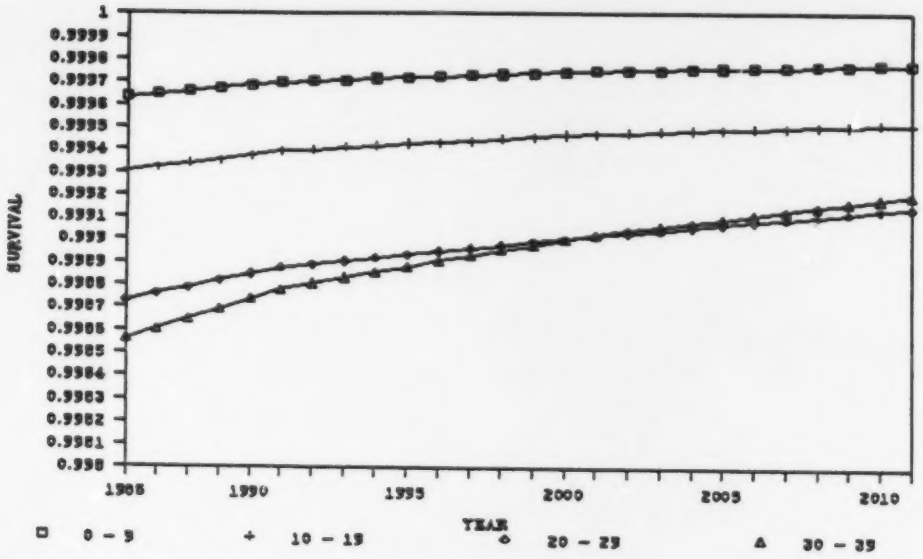
The provincial survival rates, by single year of age and sex, were applied to the 1986 population of each county. Estimated deaths were compared with the actual deaths reported in 1986.

Where deviations occurred between projected and actual total female and total male deaths, all female and/or male death rates were raised/lowered by the same percentage to project the totals recorded in 1986. Therefore, while total death rates for males and females may be higher or lower in a given county, the age specific rates will parallel the trend in provincial rates to 2006.

The male and female death rate adjustment factors were maintained throughout the projection period. No convergence of rates occurs.

**EXHIBIT A3: NOVA SCOTIA MORTALITY TRENDS**

## N.S. MALE SURVIVAL RATES




## N.S. MALE SURVIVAL RATES

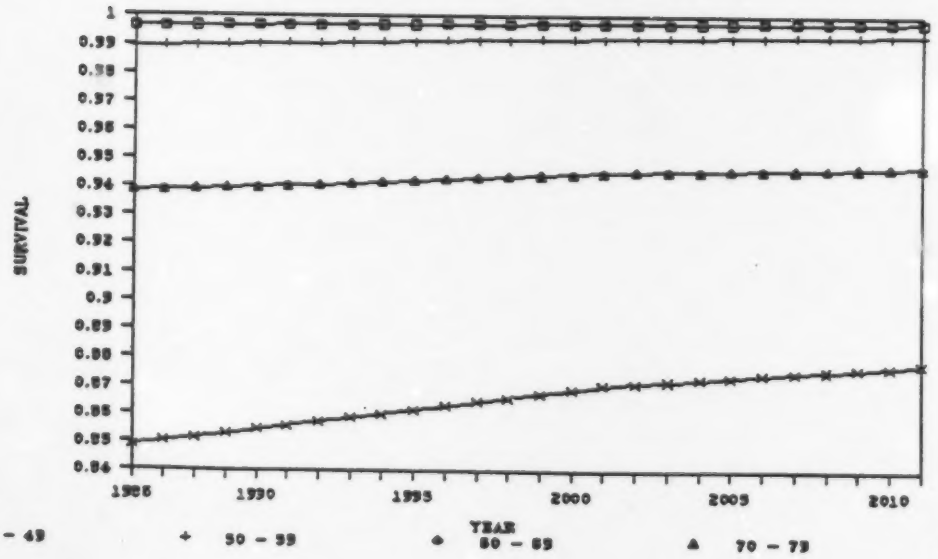
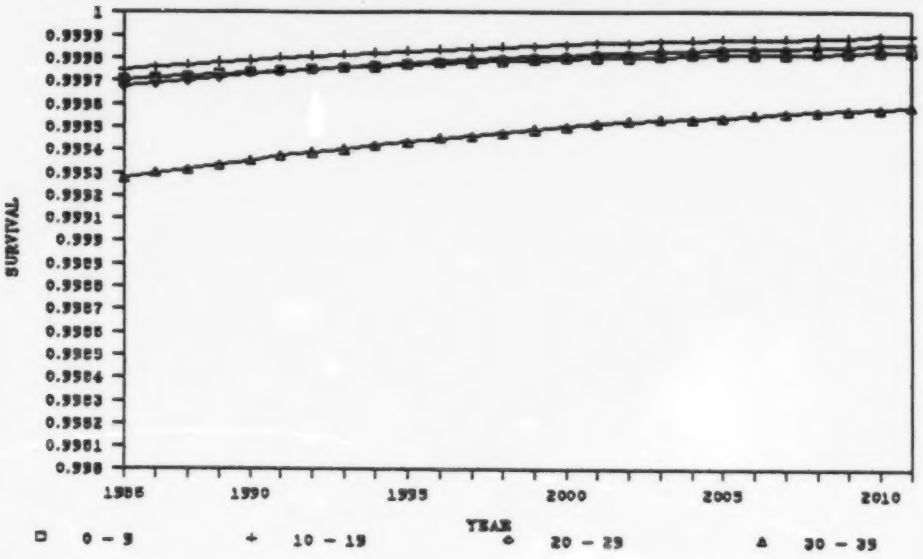
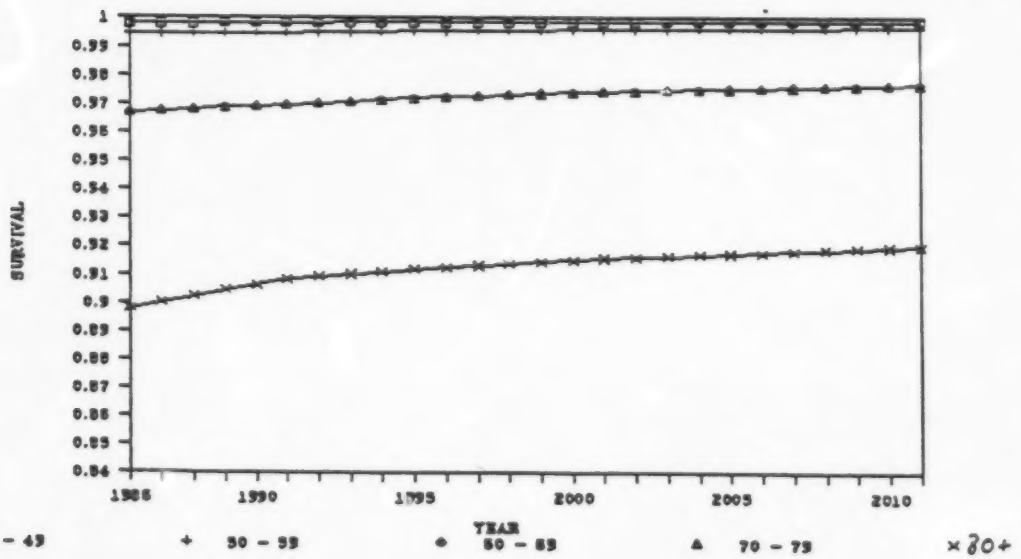


**EXHIBIT A3: NOVA SCOTIA MORTALITY TRENDS (cont'd)**

## N.S. FEMALE SURVIVAL RATES




## N.S. FEMALE SURVIVAL RATES




**SOURCE:** Statistics Canada, Demography Division (unpublished data) and The DPA Group Inc.

## 5.0 MIGRATION SUB-MODEL

Migration was estimated in three steps:

- international in and out flows;
- inter-provincial in and out flows; and
- intra-provincial in and out flows (in the county projection model).

All flows were estimated by single year of age and sex. Net flows are estimated by a residual.

In the county projection model individual migration flows were projected for each county. The in and out flows at the international and inter-provincial level were summed and compared against the provincial projection. County flows were then adjusted upwards or downwards to match the provincial control projection.

Two approaches were taken to project migration rates and flows. The first began with the average of the final assumptions used in the final version of Statistics Canada's 1986 Census based population projections for Canada the Provinces and the Territories to 2011. The second approach used regression analysis to describe the variance in historical flows with respect to economic conditions in Nova Scotia and at their major origin and destination areas.

### 5.1 Statistics Canada Average Migration Assumptions, 1986-2006

The final population projections for Nova Scotia and its counties produced in this assignment used the average of the Statistics Canada migration assumptions (1986-2011), corrected for residual errors of estimate and adjusted for Department of Industry, Trade and Technology expectations for provincial economic and migration

trends. Exhibit A4 shows the historical migration flows and future trends assumed for the base case projection.

Inter-provincial Migration - The final 1986 Census based projections of Statistics Canada provide three scenarios, A, B, C. The scenarios are based on alternative trends "extrapolated" from the historical migration patterns, 1981-82 to 1986-87.

The time series used to derive the A, B and C migration assumptions were based on data unadjusted for residual errors of estimate. Therefore we adjusted the average of the A, B and C inter-provincial migration assumptions to account for a consistent over projection of net positive migration to Nova Scotia from 1981 to 1986.[3]

The adjusted average migration assumption series were then raised slightly to account for economic and migration trends expected by the Department of Industry, Trade and Technology.

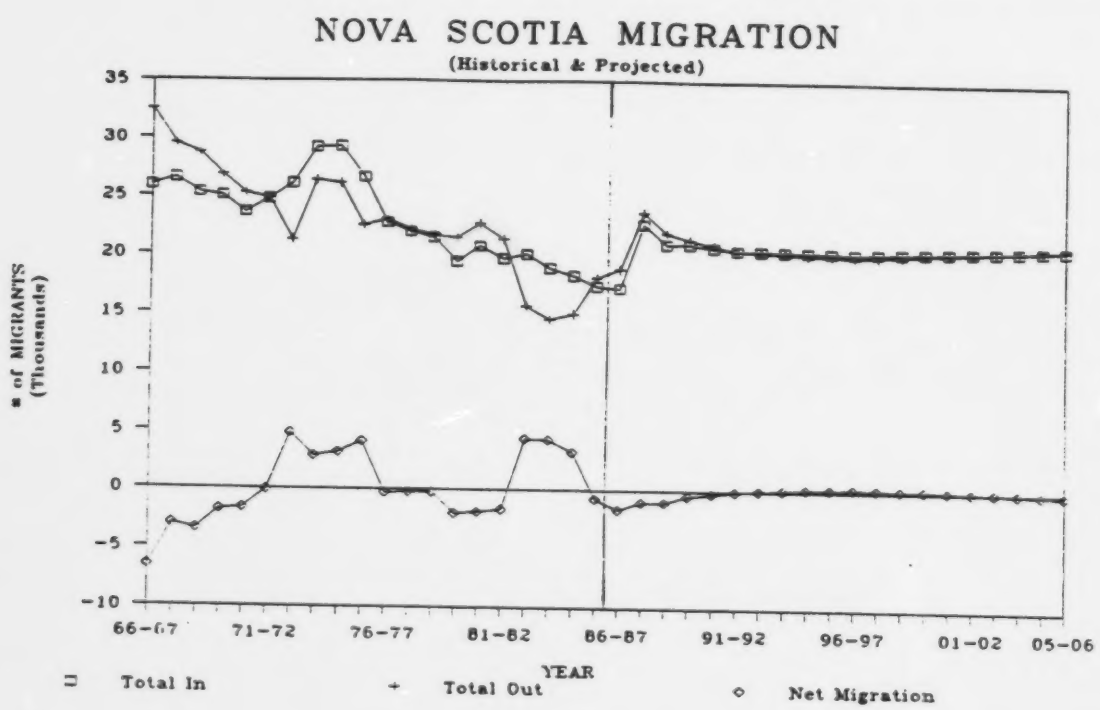
International Migration - We began with the average of the Statistics Canada's immigrant assumptions. These assumptions were stated as percentages of total Canadian immigration that would be captured by the Province. We also began with the average of assumptions for emigration contained in the final 1986 Census based Canada and Provincial Projections. The assumptions for emigration are also stated as a percentage capture of total Canadian emigrants.

Because these assumptions were also based on unadjusted historical immigration and emigration data they were adjusted to reflect the consistent over estimation of net migration to Nova Scotia during the 1981-86 period.

---

[3]The over estimation of net migration also occurred in the 1971-76 and 1976-81 periods.

**EXHIBIT A4: HISTORICAL TRENDS AND BASE CASE MIGRATION ASSUMPTIONS, 1966-67 TO 2005-06**




**SOURCE:** The DPA Group Inc.
Department of Industry, Trade and Technology

## 5.2 Regression Analysis of Historical Migration Flows

The objective of this approach to migration projection was to provide a linkage between demographic and economic projections. This would ensure that the two projection series would be consistent, if not correct. The linkage could only be established if migration flows could be linked to economic conditions.[4]

A 21 year time series (1966-86) of in and out migrant flows for inter-provincial and international migration were collected from Statistics Canada. The data are derived from Revenue Canada taxation records. After adjusting for residual errors of estimate and using economic variables describing conditions in Nova Scotia and Ontario we were able to describe 77 and 79 percent of the variance in international in and out migration and 89 and 91 percent of the variance in inter-provincial in and out migration.

Despite uncovering the strong statistical relationships, no consensus could be achieved on economic projections (1986-2006) for Nova Scotia and Ontario that would result in what was considered a reasonable population projection. The linkage of migration to economic projections to project migration flows was abandoned.

## 5.3 Age and Sex Breakdown of Migrant Flows

Data were collected from the Demography Division of Statistics Canada that described the age and sex breakdown of international

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[4]Birth and death rates are in principal also linked to economic conditions. However, within the range of economic conditions existing in most of Canada, birth and death rates appear to be unaffected. More broadly defined socio-economic variables appear to influence birth and death rates in Canada.

and inter-provincial (and intra-provincial) migrant flows for the latest five year period. These data were based on Revenue Canada taxation data. The Revenue Canada cohorts are not single year cohorts.[5] Therefore, to provide single year age migration estimates we pro-rated the migrant flows within Revenue Canada age and sex cohorts based on the single year age structure in the relevant cohort in Nova Scotia, for 1981-1986. This pro-rating provided an approximate single year age breakdown for migration flows. The average of age sex breakdowns for the 1981 to 1986 period were applied throughout the projection period.

Within the model migration in and out flows are first projected in totals (no age or sex breakdown). We then apply the single year age and sex breakdowns appropriate for international, inter-provincial and intra-provincial flows to disaggregate the totals. Single year migrant flows, by sex, are then added or deleted from the population.

### 5.4 County Migration Sub-Model

Five year average per capita inter-provincial, international and intra-provincial out migration rates were estimated for each county based on the 1981-86 county migration data (derived from Revenue Canada tax records). Each county's per capita out-migration rates (by single year of age and sex) were held constant throughout the projection period. The use of per capita rates ensured that if a cohort population dropped to zero no out migration for that cohort would be calculated by the model.[6]

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[5]Migration data based on tax records are broken down by sex and 5 age cohorts; 0-17, 18-24, 25-44, 45-64 and 65+.

[6]At the provincial level, the large numbers within each cohort did not leave age specific rates subject to wide fluctuations due to the application of constant shares.

In-migration to counties was based on their shares of provincial in migrant flows over the 1981-86 period. These shares were held constant throughout the projection period.

In the county model in and out flows (for each of three types of migration) are estimated for each county separately.

The sum of county flows for in and out international and inter-provincial migration were compared against the provincial control projections. Deviations from the control projections were adjusted for by raising or lowering the appropriate county projection on a pro-rata basis.

Intra-provincial migration in and out flows balance by definition. That is, intra-provincial migration has no effect on the total provincial population.

In the final county population projections in and out rates (international, inter-provincial and intra-provincial were adjusted to eliminate the effect of some extreme values in the 1981-86 time series in selected counties. The rates were only adjusted if the extreme values significantly affected the average rates and if the extreme values could be explained.

Single year age breakdowns for the county migration flows were estimated as for the provincial flows. Revenue Canada data provided only broad cohort definitions. Within the cohorts the migrant flows were pro-rated on the basis of the county 1981-1986 population age structure. The resulting single year of age and sex breakdown for migrants to and from each county (unique to each county) were held constant throughout the projection period.

## 6.0 HOUSEHOLD AND FAMILY PROJECTIONS

We implemented the model described in "Household and Family Projections, Canada, Provinces and Territories, 1976-2001", Statistics Canada Publication #91-522. The model employed a modified extrapolation method to extrapolate changes in household and family headship rates from historical data.[7] We use data for the 1976-86 period to project family and household age specific headship rates.

Households - In the case of households, total household headship rates, by age of head, were projected to 2006 based on the 1976-86 trend. The projected rates were then applied to the projected provincial population to produce estimates of total households.

The total household projection was split into primary family households and non-family households based through an application of the modified extrapolation technique. In this step we projected the ratio of primary family households to total households, based on the 1976-86 trend.

By definition, total households equal the sum of primary family households and non-family households. Therefore, once we have projected primary family households, by applying the primary household ratio to total households, we then estimate non-family households by residual.

Families - Family headship rates, by age of head, for total families were projected to 2006 based on the modified extrapolation technique.

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[7]The modified extrapolation method ensures that if rates are declining they will not move below zero. Similarly, if rates are rising the method ensures they will not exceed unity.

Applying the projected total family headship rates, by age of head, to the provincial population projections we derive a projection of total families.

We then project the ratio of husband and wife families to total families based on 1976-1986 data and the modified extrapolation procedure. We then apply the projected husband and wife family ratio to the total family projection and derive an estimate of husband and wife families. Lone parent families are estimated by residual.

## 6.1 County Household and Family Model

The 1986 provincial household and family age specific headship rates were applied to the 1986 Census population of each county. Total households, family households, and non-family households as well as total families, husband and wife families and lone parent families were then estimated for each county based on the provincial rates. The estimated values were compared against actual 1986 Census values. Adjustment factors were applied to the 1986 provincial rates to match the recorded values for each county in 1986. The adjustment factors provided a measure of the difference between household and family creation propensities between counties. The adjustment factors for each county were held constant throughout the projection period. Therefore, the model assumes that even though the 1986 Census age specific headship rates for each county may be higher or lower than the provincial average they will show the same trend over time as the provincial rates. No convergence or divergence is assumed.

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- Daniel Larrivee (Population Projection Section)
- Lise Champagne (Intercensal Estimates Section)
- Gilbert Lagrange (Intercensal Estimates Section)

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# APPENDIX B:
# STATISTICAL APPENDIX

## LIST OF EXHIBITS


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Exhibit B1: Nova Scotia Population by Age ('000)

| Year | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1986 | 60.1 | 61.0 | 66.2 | 71.9 | 81.5 | 78.1 | 71.6 | 68.1 | 52.9 | 43.0 | 39.8 | 37.8 | 37.2 | 34.6 | 28.7 | 19.6 | 11.7 | 5.9 | 3.3 | 873.1 |
| 1987 | 60.2 | 60.4 | 64.5 | 71.0 | 79.4 | 78.8 | 73.2 | 67.5 | 56.7 | 44.4 | 39.9 | 38.0 | 36.5 | 35.1 | 29.1 | 20.4 | 12.0 | 6.1 | 3.4 | 876.6 |
| 1988 | 60.2 | 60.6 | 62.8 | 70.3 | 76.8 | 79.7 | 74.4 | 67.3 | 59.8 | 46.3 | 40.0 | 38.3 | 36.4 | 35.2 | 29.0 | 21.2 | 12.5 | 6.3 | 3.4 | 880.7 |
| 1989 | 60.3 | 60.4 | 62.1 | 69.2 | 74.1 | 80.7 | 74.8 | 67.9 | 62.4 | 47.9 | 40.8 | 38.5 | 36.1 | 35.4 | 28.9 | 22.1 | 12.9 | 6.6 | 3.5 | 884.6 |
| 1990 | 60.3 | 60.0 | 61.6 | 67.9 | 72.0 | 81.2 | 75.5 | 69.1 | 64.6 | 49.9 | 41.4 | 38.6 | 36.1 | 34.7 | 29.6 | 22.6 | 13.5 | 6.8 | 3.6 | 889.1 |
| 1991 | 60.2 | 60.0 | 60.9 | 66.0 | 71.7 | 80.3 | 76.4 | 70.0 | 66.4 | 51.9 | 42.5 | 38.7 | 36.0 | 34.3 | 30.1 | 23.1 | 14.0 | 7.1 | 3.8 | 893.5 |
| 1992 | 59.7 | 60.3 | 60.5 | 64.5 | 71.3 | 78.6 | 77.1 | 71.6 | 65.9 | 55.6 | 43.9 | 38.8 | 36.3 | 33.7 | 30.6 | 23.4 | 14.6 | 7.4 | 3.9 | 897.9 |
| 1993 | 59.1 | 60.4 | 60.0 | 63.0 | 71.0 | 76.4 | 78.0 | 72.8 | 65.6 | 58.7 | 45.8 | 39.0 | 36.6 | 33.6 | 30.8 | 23.5 | 15.3 | 7.8 | 4.1 | 902.2 |
| 1994 | 58.4 | 60.6 | 60.7 | 62.4 | 70.2 | 74.8 | 79.1 | 73.2 | 66.4 | 61.2 | 47.4 | 39.8 | 36.8 | 33.4 | 30.9 | 23.5 | 16.0 | 8.1 | 4.3 | 906.3 |
| 1995 | 57.6 | 60.7 | 60.4 | 62.0 | 69.2 | 72.2 | 79.5 | 73.9 | 67.5 | 63.4 | 49.3 | 40.3 | 36.8 | 33.4 | 30.4 | 24.1 | 16.5 | 8.5 | 4.5 | 910.3 |
| 1996 | 56.8 | 60.6 | 60.5 | 61.4 | 67.4 | 72.1 | 78.7 | 74.9 | 68.4 | 65.2 | 51.3 | 41.4 | 37.0 | 33.4 | 30.1 | 24.5 | 16.9 | 8.9 | 4.8 | 914.2 |
| 1997 | 56.0 | 60.2 | 60.0 | 61.1 | 66.1 | 71.8 | 77.1 | 75.6 | 70.0 | 66.6 | 54.9 | 42.7 | 37.1 | 33.7 | 29.7 | 25.0 | 17.2 | 9.3 | 5.0 | 917.9 |
| 1998 | 55.3 | 59.6 | 60.9 | 61.4 | 64.7 | 71.7 | 74.9 | 76.5 | 71.1 | 66.4 | 57.9 | 44.6 | 37.2 | 34.0 | 29.6 | 25.2 | 17.3 | 9.8 | 5.3 | 921.3 |
| 1999 | 54.5 | 58.9 | 61.2 | 61.3 | 64.3 | 71.0 | 72.5 | 77.5 | 71.6 | 65.1 | 60.4 | 46.1 | 38.0 | 34.1 | 29.5 | 25.4 | 17.3 | 10.3 | 5.5 | 924.6 |
| 2000 | 53.8 | 58.2 | 61.3 | 61.0 | 64.1 | 70.1 | 70.7 | 77.9 | 72.2 | 66.2 | 62.5 | 48.0 | 38.5 | 34.2 | 29.5 | 25.0 | 17.8 | 10.6 | 5.8 | 927.5 |
| 2001 | 53.1 | 57.4 | 61.2 | 61.1 | 63.6 | 68.5 | 70.6 | 77.1 | 73.1 | 67.1 | 64.1 | 49.8 | 39.5 | 34.4 | 29.6 | 24.8 | 18.3 | 10.9 | 6.2 | 930.3 |
| 2002 | 52.5 | 56.6 | 60.9 | 61.5 | 63.3 | 67.2 | 70.3 | 75.5 | 73.8 | 68.5 | 63.5 | 53.3 | 40.8 | 34.5 | 29.8 | 24.5 | 18.7 | 11.1 | 6.5 | 932.8 |
| 2003 | 51.9 | 55.9 | 60.3 | 61.6 | 63.6 | 65.9 | 70.2 | 73.3 | 74.7 | 69.7 | 63.3 | 56.2 | 42.5 | 34.6 | 30.1 | 24.5 | 18.8 | 11.2 | 6.9 | 935.2 |
| 2004 | 51.3 | 55.1 | 59.6 | 61.9 | 63.6 | 65.5 | 69.6 | 71.8 | 75.7 | 70.1 | 63.9 | 58.5 | 44.8 | 35.3 | 30.3 | 24.4 | 19.0 | 11.3 | 7.2 | 937.3 |
| 2005 | 50.8 | 54.4 | 58.9 | 62.0 | 63.2 | 65.3 | 68.7 | 69.2 | 76.1 | 70.7 | 64.9 | 60.5 | 45.7 | 35.8 | 30.4 | 24.4 | 18.7 | 11.7 | 7.6 | 939.2 |
| 2006 | 50.5 | 53.8 | 58.1 | 62.0 | 63.3 | 64.8 | 67.1 | 69.1 | 75.3 | 71.6 | 65.7 | 62.1 | 47.5 | 36.7 | 30.5 | 24.5 | 18.6 | 12.0 | 7.8 | 941.0 |

The DPA Group Inc.

**Exhibit B2: Nova Scotia Male Population by Age ('000)**

| Year | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1986 | 30.8 | 31.0 | 34.1 | 37.2 | 41.5 | 38.9 | 35.2 | 34.0 | 26.6 | 21.5 | 19.9 | 18.2 | 17.6 | 15.8 | 12.8 | 8.4 | 4.3 | 1.9 | 0.9 | 430.6 |
| 1987 | 30.9 | 30.7 | 33.2 | 36.5 | 40.6 | 39.3 | 36.3 | 33.5 | 28.5 | 22.2 | 20.0 | 18.4 | 17.2 | 16.1 | 12.9 | 8.7 | 4.5 | 1.9 | 0.8 | 432.1 |
| 1988 | 30.9 | 30.8 | 32.3 | 36.2 | 39.3 | 39.9 | 36.8 | 33.4 | 29.9 | 23.0 | 20.0 | 18.7 | 17.1 | 16.1 | 12.8 | 9.0 | 4.7 | 2.0 | 0.8 | 434.0 |
| 1989 | 31.0 | 30.8 | 31.9 | 35.5 | 38.1 | 40.6 | 37.1 | 33.6 | 31.1 | 23.8 | 20.6 | 18.8 | 17.0 | 16.2 | 12.7 | 9.3 | 4.9 | 2.1 | 0.8 | 435.0 |
| 1990 | 31.0 | 30.5 | 31.7 | 34.9 | 37.0 | 41.0 | 37.4 | 34.0 | 32.3 | 25.0 | 20.7 | 18.9 | 17.0 | 16.0 | 12.9 | 9.3 | 5.1 | 2.2 | 0.9 | 437.0 |
| 1991 | 30.9 | 30.8 | 31.0 | 34.0 | 37.0 | 40.7 | 37.9 | 34.3 | 33.1 | 26.0 | 21.2 | 19.1 | 17.0 | 15.8 | 13.1 | 9.5 | 5.3 | 2.2 | 0.9 | 439.0 |
| 1992 | 30.7 | 31.0 | 30.8 | 33.2 | 36.6 | 40.1 | 38.3 | 35.4 | 32.6 | 27.8 | 21.9 | 19.2 | 17.3 | 15.4 | 13.3 | 9.6 | 5.5 | 2.3 | 0.9 | 441.0 |
| 1993 | 30.3 | 31.1 | 31.0 | 32.4 | 36.4 | 39.0 | 39.0 | 35.9 | 32.5 | 29.2 | 22.7 | 19.3 | 17.6 | 15.4 | 13.4 | 9.5 | 5.7 | 2.5 | 0.9 | 443.0 |
| 1994 | 29.9 | 31.2 | 31.0 | 32.1 | 35.9 | 37.9 | 39.6 | 36.2 | 32.7 | 30.4 | 23.5 | 19.8 | 17.7 | 15.3 | 13.5 | 9.5 | 5.9 | 2.6 | 1.0 | 445.6 |
| 1995 | 29.4 | 31.3 | 30.8 | 31.9 | 35.4 | 37.0 | 40.1 | 36.5 | 33.1 | 31.5 | 24.6 | 20.0 | 17.7 | 15.3 | 13.3 | 9.7 | 6.0 | 2.7 | 1.0 | 447.4 |
| 1996 | 29.0 | 31.2 | 31.0 | 31.3 | 34.7 | 37.1 | 39.8 | 37.0 | 33.4 | 32.3 | 25.6 | 20.4 | 18.0 | 15.4 | 13.2 | 9.8 | 6.1 | 2.8 | 1.1 | 449.2 |
| 1997 | 28.6 | 30.9 | 31.3 | 31.1 | 34.0 | 36.8 | 39.2 | 37.4 | 34.4 | 31.9 | 27.3 | 21.1 | 18.1 | 15.7 | 12.9 | 10.0 | 6.2 | 2.9 | 1.1 | 450.9 |
| 1998 | 28.2 | 30.6 | 31.4 | 31.3 | 33.3 | 36.7 | 38.1 | 38.1 | 35.0 | 31.8 | 28.7 | 21.9 | 18.2 | 15.9 | 12.9 | 10.1 | 6.0 | 3.1 | 1.2 | 452.3 |
| 1999 | 27.8 | 30.2 | 31.6 | 31.3 | 33.1 | 36.3 | 37.0 | 38.7 | 35.2 | 32.0 | 29.8 | 22.7 | 18.7 | 16.0 | 12.9 | 10.2 | 6.1 | 3.2 | 1.3 | 453.9 |
| 2000 | 27.4 | 29.8 | 31.6 | 31.1 | 32.9 | 35.8 | 36.1 | 39.1 | 35.6 | 32.3 | 30.9 | 23.7 | 18.8 | 16.1 | 12.9 | 10.1 | 6.3 | 3.2 | 1.3 | 455.2 |
| 2001 | 27.0 | 29.3 | 31.5 | 31.4 | 32.4 | 35.2 | 36.2 | 38.8 | 36.0 | 32.6 | 31.7 | 24.6 | 19.2 | 16.3 | 13.0 | 10.0 | 6.4 | 3.3 | 1.4 | 456.4 |
| 2002 | 26.6 | 28.9 | 31.3 | 31.6 | 32.2 | 34.5 | 35.9 | 38.2 | 36.4 | 33.6 | 31.2 | 26.3 | 19.9 | 16.4 | 13.2 | 9.8 | 6.6 | 3.4 | 1.5 | 457.6 |
| 2003 | 26.3 | 28.5 | 31.0 | 31.8 | 32.5 | 33.8 | 35.8 | 37.1 | 37.0 | 34.1 | 31.1 | 27.6 | 20.6 | 16.5 | 13.5 | 9.8 | 6.6 | 3.4 | 1.6 | 458.6 |
| 2004 | 26.0 | 28.1 | 30.6 | 32.0 | 32.5 | 33.6 | 35.3 | 36.1 | 37.6 | 34.3 | 31.3 | 28.7 | 21.3 | 16.9 | 13.6 | 9.8 | 6.7 | 3.4 | 1.7 | 459.5 |
| 2005 | 25.8 | 27.7 | 30.2 | 32.0 | 32.3 | 33.5 | 34.9 | 35.2 | 38.0 | 34.6 | 31.5 | 29.7 | 22.3 | 17.1 | 13.6 | 9.9 | 6.7 | 3.5 | 1.7 | 460.4 |
| 2006 | 25.6 | 27.4 | 29.7 | 32.0 | 32.5 | 32.9 | 34.3 | 35.3 | 37.7 | 35.1 | 31.8 | 30.4 | 23.1 | 17.5 | 13.9 | 9.9 | 6.6 | 3.6 | 1.8 | 461.2 |

The DPA Group Inc.

Exhibit B3: Nova Scotia Female Population by Age

| Year | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1986 | 29.3 | 30.0 | 32.1 | 34.7 | 40.1 | 39.2 | 36.4 | 34.0 | 26.3 | 21.5 | 20.0 | 19.6 | 19.6 | 18.8 | 15.9 | 11.2 | 7.3 | 4.0 | 2.5 | 442.6 |
| 1987 | 29.3 | 29.7 | 31.3 | 34.5 | 38.8 | 39.6 | 36.9 | 34.0 | 28.3 | 22.2 | 19.9 | 19.6 | 19.3 | 19.1 | 16.2 | 11.7 | 7.6 | 4.1 | 2.5 | 444.5 |
| 1988 | 29.3 | 29.7 | 30.5 | 34.2 | 37.5 | 39.8 | 37.6 | 33.8 | 29.9 | 23.2 | 20.0 | 19.6 | 19.3 | 19.1 | 16.3 | 12.2 | 7.8 | 4.4 | 2.6 | 446.7 |
| 1989 | 29.3 | 29.6 | 30.1 | 33.8 | 36.8 | 40.1 | 37.7 | 34.3 | 31.3 | 24.1 | 20.3 | 19.7 | 19.1 | 19.2 | 16.3 | 12.8 | 8.0 | 4.5 | 2.7 | 448.9 |
| 1990 | 29.3 | 29.4 | 30.0 | 33.1 | 34.9 | 40.1 | 38.1 | 35.1 | 32.4 | 24.9 | 20.7 | 19.7 | 19.1 | 18.7 | 16.7 | 13.3 | 8.4 | 4.7 | 2.8 | 451.3 |
| 1991 | 29.2 | 29.2 | 29.9 | 32.0 | 34.7 | 39.6 | 38.5 | 35.7 | 33.3 | 25.9 | 21.3 | 19.6 | 19.0 | 18.5 | 17.0 | 13.6 | 8.7 | 4.9 | 2.9 | 453.7 |
| 1992 | 29.1 | 29.3 | 29.7 | 31.3 | 34.7 | 38.5 | 38.8 | 36.2 | 33.3 | 27.8 | 22.0 | 19.6 | 19.0 | 18.3 | 17.3 | 13.8 | 9.2 | 5.1 | 3.0 | 456.1 |
| 1993 | 28.8 | 29.3 | 29.8 | 30.6 | 34.6 | 37.4 | 39.1 | 36.8 | 33.1 | 29.4 | 23.1 | 19.6 | 19.0 | 18.2 | 17.4 | 14.0 | 9.6 | 5.3 | 3.2 | 458.4 |
| 1994 | 28.5 | 29.4 | 29.7 | 30.3 | 34.3 | 36.1 | 39.4 | 37.0 | 33.6 | 30.8 | 23.9 | 19.9 | 19.1 | 18.1 | 17.5 | 14.0 | 10.1 | 5.5 | 3.3 | 460.7 |
| 1995 | 28.2 | 29.4 | 29.6 | 30.1 | 33.7 | 35.1 | 39.5 | 37.4 | 34.4 | 31.9 | 24.7 | 20.3 | 19.1 | 18.1 | 17.1 | 14.4 | 10.5 | 5.8 | 3.5 | 462.9 |
| 1996 | 27.8 | 29.4 | 29.4 | 30.1 | 32.7 | 35.0 | 38.9 | 37.8 | 35.0 | 32.6 | 25.7 | 20.9 | 19.0 | 18.0 | 16.9 | 14.7 | 10.8 | 6.1 | 3.7 | 465.0 |
| 1997 | 27.5 | 29.3 | 29.5 | 30.0 | 32.1 | 35.0 | 37.9 | 38.2 | 35.5 | 32.8 | 27.6 | 21.6 | 19.0 | 18.0 | 16.7 | 15.0 | 11.0 | 6.4 | 3.9 | 467.0 |
| 1998 | 27.1 | 29.0 | 29.6 | 30.1 | 31.5 | 35.0 | 36.8 | 38.4 | 36.2 | 32.7 | 29.2 | 22.7 | 19.0 | 18.1 | 16.7 | 15.1 | 11.2 | 6.7 | 4.1 | 469.0 |
| 1999 | 26.8 | 28.7 | 29.6 | 30.0 | 31.3 | 34.8 | 35.5 | 38.8 | 36.4 | 33.1 | 30.5 | 23.5 | 19.3 | 18.1 | 16.6 | 15.2 | 11.2 | 7.1 | 4.3 | 470.7 |
| 2000 | 26.5 | 28.4 | 29.7 | 29.9 | 31.2 | 34.3 | 34.6 | 38.8 | 36.7 | 33.9 | 31.5 | 24.2 | 19.7 | 18.1 | 16.6 | 14.9 | 11.5 | 7.4 | 4.5 | 472.3 |
| 2001 | 26.1 | 28.0 | 29.7 | 29.7 | 31.2 | 33.3 | 34.4 | 38.3 | 37.1 | 34.4 | 32.4 | 25.2 | 20.3 | 18.1 | 16.6 | 14.8 | 11.9 | 7.6 | 4.8 | 473.9 |
| 2002 | 25.8 | 27.7 | 29.6 | 29.8 | 31.1 | 32.7 | 34.4 | 37.3 | 37.5 | 35.0 | 32.4 | 27.0 | 20.9 | 18.1 | 16.6 | 14.6 | 12.1 | 7.8 | 5.0 | 475.3 |
| 2003 | 25.5 | 27.4 | 29.3 | 29.9 | 31.2 | 32.1 | 34.4 | 36.2 | 37.7 | 35.6 | 32.2 | 28.5 | 21.9 | 18.1 | 16.7 | 14.7 | 12.2 | 7.8 | 5.3 | 476.6 |
| 2004 | 25.3 | 27.0 | 29.0 | 29.9 | 31.1 | 31.9 | 34.2 | 34.9 | 38.1 | 35.7 | 32.6 | 29.0 | 22.7 | 18.4 | 16.7 | 14.6 | 12.3 | 7.9 | 5.6 | 477.7 |
| 2005 | 25.1 | 26.7 | 28.7 | 30.0 | 31.0 | 31.8 | 33.7 | 34.0 | 38.1 | 36.1 | 33.4 | 30.0 | 23.4 | 18.7 | 16.7 | 14.6 | 12.0 | 8.2 | 5.9 | 478.0 |
| 2006 | 24.9 | 26.4 | 28.4 | 30.0 | 30.8 | 31.8 | 32.8 | 33.9 | 37.6 | 36.5 | 33.9 | 31.7 | 24.4 | 19.3 | 16.7 | 14.6 | 12.0 | 8.4 | 6.1 | 479.9 |

The DPA Group Inc.

**Exhibit B4: Nova Scotia Population Distribution by Age**

| Year | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1986 | 6.9% | 7.0% | 7.6% | 8.2% | 9.3% | 8.9% | 8.2% | 7.8% | 6.1% | 4.9% | 4.6% | 4.3% | 4.3% | 4.0% | 3.3% | 2.2% | 1.3% | 0.7% | 0.4% | 100.0 |
| 1987 | 6.9% | 6.9% | 7.4% | 8.1% | 9.1% | 9.0% | 8.4% | 7.7% | 6.5% | 5.1% | 4.6% | 4.3% | 4.2% | 4.0% | 3.3% | 2.3% | 1.4% | 0.7% | 0.4% | 100.0 |
| 1988 | 6.8% | 6.9% | 7.1% | 8.0% | 8.7% | 9.1% | 8.4% | 7.6% | 6.8% | 5.3% | 4.5% | 4.4% | 4.1% | 4.0% | 3.3% | 2.4% | 1.4% | 0.7% | 0.4% | 100.0 |
| 1989 | 6.8% | 6.8% | 7.0% | 7.8% | 8.4% | 9.1% | 8.5% | 7.7% | 7.1% | 5.4% | 4.6% | 4.4% | 4.1% | 4.0% | 3.3% | 2.5% | 1.5% | 0.7% | 0.4% | 100.0 |
| 1990 | 6.8% | 6.7% | 6.9% | 7.6% | 8.1% | 9.1% | 8.5% | 7.8% | 7.3% | 5.6% | 4.7% | 4.3% | 4.1% | 3.9% | 3.3% | 2.5% | 1.5% | 0.8% | 0.4% | 100.0 |
| 1991 | 6.7% | 6.7% | 6.8% | 7.4% | 8.0% | 9.0% | 8.6% | 7.8% | 7.4% | 5.8% | 4.8% | 4.3% | 4.0% | 3.8% | 3.4% | 2.6% | 1.6% | 0.8% | 0.4% | 100.0 |
| 1992 | 6.7% | 6.7% | 6.7% | 7.2% | 7.9% | 8.8% | 8.6% | 8.0% | 7.3% | 6.2% | 4.9% | 4.3% | 4.0% | 3.8% | 3.4% | 2.6% | 1.6% | 0.8% | 0.4% | 100.0 |
| 1993 | 6.6% | 6.7% | 6.7% | 7.8% | 7.9% | 8.5% | 8.6% | 8.1% | 7.3% | 6.5% | 5.1% | 4.3% | 4.1% | 3.7% | 3.4% | 2.6% | 1.7% | 0.9% | 0.5% | 100.0 |
| 1994 | 6.4% | 6.7% | 6.7% | 6.9% | 7.8% | 8.2% | 8.7% | 8.1% | 7.3% | 6.8% | 5.2% | 4.4% | 4.1% | 3.7% | 3.4% | 2.6% | 1.8% | 0.9% | 0.5% | 100.0 |
| 1995 | 6.3% | 6.7% | 6.6% | 6.8% | 7.6% | 7.9% | 8.7% | 8.1% | 7.4% | 7.0% | 5.4% | 4.4% | 4.0% | 3.7% | 3.3% | 2.6% | 1.8% | 0.9% | 0.5% | 100.0 |
| 1996 | 6.2% | 6.6% | 6.6% | 6.7% | 7.4% | 7.9% | 8.6% | 8.2% | 7.5% | 7.1% | 5.6% | 4.5% | 4.0% | 3.7% | 3.3% | 2.7% | 1.8% | 1.0% | 0.5% | 100.0 |
| 1997 | 6.1% | 6.6% | 6.6% | 6.7% | 7.2% | 7.8% | 8.4% | 8.2% | 7.6% | 7.0% | 6.0% | 4.7% | 4.0% | 3.7% | 3.2% | 2.7% | 1.9% | 1.0% | 0.5% | 100.0 |
| 1998 | 6.0% | 6.5% | 6.6% | 6.7% | 7.0% | 7.8% | 8.1% | 8.3% | 7.7% | 7.0% | 6.3% | 4.8% | 4.0% | 3.7% | 3.2% | 2.7% | 1.9% | 1.1% | 0.6% | 100.0 |
| 1999 | 5.9% | 6.4% | 6.6% | 6.6% | 7.0% | 7.7% | 7.8% | 8.4% | 7.7% | 7.0% | 6.5% | 5.0% | 4.1% | 3.7% | 3.2% | 2.7% | 1.9% | 1.1% | 0.6% | 100.0 |
| 2000 | 5.8% | 6.3% | 6.6% | 6.6% | 6.9% | 7.6% | 7.6% | 8.4% | 7.8% | 7.1% | 6.7% | 5.2% | 4.2% | 3.7% | 3.2% | 2.7% | 1.9% | 1.1% | 0.6% | 100.0 |
| 2001 | 5.7% | 6.2% | 6.6% | 6.6% | 6.8% | 7.4% | 7.6% | 8.3% | 7.9% | 7.2% | 6.9% | 5.4% | 4.2% | 3.7% | 3.2% | 2.7% | 2.0% | 1.2% | 0.7% | 100.0 |
| 2002 | 5.6% | 6.1% | 6.5% | 6.6% | 6.8% | 7.2% | 7.5% | 8.1% | 7.9% | 7.3% | 6.8% | 5.7% | 4.4% | 3.7% | 3.2% | 2.6% | 2.0% | 1.2% | 0.7% | 100.0 |
| 2003 | 5.5% | 6.0% | 6.4% | 6.6% | 6.8% | 7.0% | 7.5% | 7.8% | 8.0% | 7.4% | 6.8% | 6.0% | 4.5% | 3.7% | 3.2% | 2.6% | 2.0% | 1.2% | 0.7% | 100.0 |
| 2004 | 5.5% | 5.9% | 6.4% | 6.6% | 6.8% | 7.0% | 7.4% | 7.6% | 8.1% | 7.5% | 6.8% | 6.2% | 4.7% | 3.8% | 3.2% | 2.6% | 2.0% | 1.2% | 0.8% | 100.0 |
| 2005 | 5.4% | 5.8% | 6.3% | 6.6% | 6.7% | 7.0% | 7.3% | 7.4% | 8.1% | 7.5% | 6.9% | 6.4% | 4.9% | 3.8% | 3.2% | 2.6% | 2.0% | 1.2% | 0.8% | 100.0 |
| 2006 | 5.4% | 5.7% | 6.2% | 6.6% | 6.7% | 6.9% | 7.1% | 7.3% | 8.0% | 7.6% | 7.0% | 6.6% | 5.0% | 3.9% | 3.2% | 2.6% | 2.0% | 1.3% | 0.8% | 100.0 |

The DPA Group Inc.

Exhibit B5: Nova Scotia Male Population Distribution by Age

| Year | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1986 | 7.2% | 7.2% | 7.9% | 8.6% | 9.6% | 9.0% | 8.2% | 7.9% | 6.2% | 5.0% | 4.6% | 4.2% | 4.1% | 3.7% | 3.0% | 1.9% | 1.0% | 0.4% | 0.2% | 100.0 |
| 1987 | 7.2% | 7.1% | 7.7% | 8.5% | 9.4% | 9.1% | 8.4% | 7.8% | 6.6% | 5.1% | 4.6% | 4.3% | 4.0% | 3.7% | 3.0% | 2.0% | 1.0% | 0.5% | 0.2% | 100.0 |
| 1988 | 7.1% | 7.1% | 7.4% | 8.3% | 9.1% | 9.2% | 8.5% | 7.7% | 6.9% | 5.3% | 4.6% | 4.3% | 3.9% | 3.7% | 2.9% | 2.1% | 1.1% | 0.5% | 0.2% | 100.0 |
| 1989 | 7.1% | 7.1% | 7.3% | 8.1% | 8.7% | 9.3% | 8.5% | 7.7% | 7.1% | 5.5% | 4.7% | 4.3% | 3.9% | 3.7% | 2.9% | 2.1% | 1.1% | 0.5% | 0.2% | 100.0 |
| 1990 | 7.1% | 7.0% | 7.2% | 8.0% | 8.5% | 9.4% | 8.5% | 7.8% | 7.4% | 5.7% | 4.7% | 4.3% | 3.9% | 3.7% | 3.0% | 2.1% | 1.2% | 0.5% | 0.2% | 100.0 |
| 1991 | 7.0% | 7.0% | 7.1% | 7.7% | 8.4% | 9.3% | 8.6% | 7.8% | 7.5% | 5.9% | 4.8% | 4.4% | 3.9% | 3.6% | 3.0% | 2.2% | 1.2% | 0.5% | 0.2% | 100.0 |
| 1992 | 6.9% | 7.0% | 7.0% | 7.5% | 8.3% | 9.1% | 8.7% | 8.0% | 7.4% | 6.3% | 5.0% | 4.4% | 3.9% | 3.5% | 3.0% | 2.2% | 1.2% | 0.5% | 0.2% | 100.0 |
| 1993 | 6.8% | 7.0% | 7.0% | 7.3% | 8.2% | 8.8% | 8.8% | 8.1% | 7.3% | 6.6% | 5.1% | 4.4% | 4.0% | 3.5% | 3.0% | 2.1% | 1.3% | 0.6% | 0.2% | 100.0 |
| 1994 | 6.7% | 7.0% | 6.9% | 7.2% | 8.1% | 8.5% | 8.9% | 8.1% | 7.3% | 6.8% | 5.3% | 4.4% | 4.0% | 3.4% | 3.0% | 2.1% | 1.3% | 0.6% | 0.2% | 100.0 |
| 1995 | 6.6% | 7.0% | 6.9% | 7.1% | 7.9% | 8.3% | 9.0% | 8.2% | 7.4% | 7.0% | 5.5% | 4.5% | 4.0% | 3.4% | 3.0% | 2.2% | 1.3% | 0.6% | 0.2% | 100.0 |
| 1996 | 6.5% | 6.9% | 6.9% | 7.0% | 7.7% | 8.3% | 8.9% | 8.2% | 7.4% | 7.2% | 5.7% | 4.5% | 4.0% | 3.4% | 2.9% | 2.2% | 1.4% | 0.6% | 0.2% | 100.0 |
| 1997 | 6.3% | 6.9% | 6.9% | 6.9% | 7.5% | 8.2% | 8.7% | 8.3% | 7.6% | 7.1% | 6.1% | 4.7% | 4.0% | 3.5% | 2.9% | 2.2% | 1.4% | 0.7% | 0.2% | 100.0 |
| 1998 | 6.2% | 6.8% | 6.9% | 6.9% | 7.4% | 8.1% | 8.4% | 8.4% | 7.7% | 7.0% | 6.4% | 4.8% | 4.0% | 3.5% | 2.9% | 2.2% | 1.3% | 0.7% | 0.3% | 100.0 |
| 1999 | 6.1% | 6.7% | 7.0% | 6.9% | 7.3% | 8.0% | 8.2% | 8.5% | 7.8% | 7.0% | 6.6% | 5.0% | 4.1% | 3.5% | 2.8% | 2.2% | 1.4% | 0.7% | 0.3% | 100.0 |
| 2000 | 6.0% | 6.5% | 6.9% | 6.8% | 7.2% | 7.9% | 7.9% | 8.6% | 7.8% | 7.1% | 6.8% | 5.2% | 4.1% | 3.5% | 2.8% | 2.2% | 1.4% | 0.7% | 0.3% | 100.0 |
| 2001 | 5.9% | 6.4% | 6.9% | 6.9% | 7.1% | 7.7% | 7.9% | 8.5% | 7.9% | 7.1% | 6.9% | 5.4% | 4.2% | 3.6% | 2.8% | 2.2% | 1.4% | 0.7% | 0.3% | 100.0 |
| 2002 | 5.8% | 6.3% | 6.8% | 6.9% | 7.0% | 7.5% | 7.8% | 8.3% | 8.0% | 7.3% | 6.8% | 5.7% | 4.3% | 3.6% | 2.9% | 2.1% | 1.4% | 0.7% | 0.3% | 100.0 |
| 2003 | 5.7% | 6.2% | 6.8% | 6.9% | 7.1% | 7.4% | 7.8% | 8.1% | 8.1% | 7.4% | 6.8% | 6.0% | 4.5% | 3.6% | 2.9% | 2.1% | 1.4% | 0.7% | 0.3% | 100.0 |
| 2004 | 5.7% | 6.1% | 6.7% | 7.0% | 7.1% | 7.3% | 7.7% | 7.9% | 8.2% | 7.5% | 6.8% | 6.2% | 4.6% | 3.7% | 3.0% | 2.1% | 1.5% | 0.7% | 0.4% | 100.0 |
| 2005 | 5.6% | 6.0% | 6.6% | 7.0% | 7.0% | 7.3% | 7.6% | 7.7% | 8.3% | 7.5% | 6.8% | 6.5% | 4.8% | 3.7% | 3.0% | 2.1% | 1.4% | 0.8% | 0.4% | 100.0 |
| 2006 | 5.5% | 5.9% | 6.4% | 6.9% | 7.1% | 7.1% | 7.4% | 7.6% | 8.2% | 7.6% | 6.9% | 6.6% | 5.0% | 3.8% | 3.0% | 2.2% | 1.4% | 0.8% | 0.4% | 100.0 |

The DPA Group Inc.

| Exhibit B6: Nova Scotia Female Population Distribution by Age | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90+ | Total |
| 1986 | 6.6% | 6.8% | 7.3% | 7.8% | 9.1% | 8.9% | 8.2% | 7.7% | 5.9% | 4.9% | 4.5% | 4.4% | 4.4% | 4.3% | 3.6% | 2.5% | 1.7% | 0.9% | 0.6% | 100.0 |
| 1987 | 6.6% | 6.7% | 7.0% | 7.8% | 8.7% | 8.9% | 8.3% | 7.6% | 6.4% | 5.0% | 4.5% | 4.4% | 4.4% | 4.3% | 3.6% | 2.6% | 1.7% | 0.9% | 0.6% | 100.0 |
| 1988 | 6.6% | 6.7% | 6.8% | 7.7% | 8.4% | 8.9% | 8.4% | 7.6% | 6.7% | 5.2% | 4.5% | 4.4% | 4.3% | 4.3% | 3.6% | 2.7% | 1.7% | 1.0% | 0.6% | 100.0 |
| 1989 | 6.5% | 6.6% | 6.7% | 7.5% | 8.8% | 8.9% | 8.4% | 7.6% | 7.0% | 5.4% | 4.5% | 4.4% | 4.3% | 4.3% | 3.6% | 2.9% | 1.8% | 1.0% | 0.6% | 100.0 |
| 1990 | 6.5% | 6.5% | 6.6% | 7.3% | 7.7% | 8.9% | 8.4% | 7.8% | 7.2% | 5.5% | 4.6% | 4.4% | 4.2% | 4.2% | 3.7% | 2.9% | 1.9% | 1.0% | 0.6% | 100.0 |
| 1991 | 6.4% | 6.4% | 6.6% | 7.1% | 7.6% | 8.7% | 8.5% | 7.9% | 7.3% | 5.7% | 4.7% | 4.3% | 4.2% | 4.1% | 3.8% | 3.0% | 1.9% | 1.1% | 0.6% | 100.0 |
| 1992 | 6.4% | 6.4% | 6.5% | 6.9% | 7.6% | 8.4% | 8.5% | 7.9% | 7.3% | 6.1% | 4.8% | 4.3% | 4.2% | 4.0% | 3.8% | 3.0% | 2.0% | 1.1% | 0.7% | 100.0 |
| 1993 | 6.3% | 6.4% | 6.5% | 6.7% | 7.5% | 8.2% | 8.5% | 8.0% | 7.2% | 6.4% | 5.0% | 4.3% | 4.2% | 4.0% | 3.8% | 3.0% | 2.1% | 1.2% | 0.7% | 100.0 |
| 1994 | 6.2% | 6.4% | 6.5% | 6.6% | 7.4% | 7.8% | 8.6% | 8.0% | 7.3% | 6.7% | 5.2% | 4.3% | 4.1% | 3.9% | 3.8% | 3.0% | 2.2% | 1.2% | 0.7% | 100.0 |
| 1995 | 6.1% | 6.4% | 6.4% | 6.5% | 7.3% | 7.6% | 8.5% | 8.1% | 7.4% | 6.9% | 5.3% | 4.4% | 4.1% | 3.9% | 3.7% | 3.1% | 2.3% | 1.3% | 0.7% | 100.0 |
| 1996 | 6.0% | 6.3% | 6.3% | 6.5% | 7.0% | 7.5% | 8.4% | 8.1% | 7.5% | 7.1% | 5.5% | 4.5% | 4.1% | 3.9% | 3.6% | 3.2% | 2.3% | 1.3% | 0.8% | 100.0 |
| 1997 | 5.9% | 6.3% | 6.3% | 6.4% | 6.9% | 7.5% | 8.1% | 8.2% | 7.6% | 7.0% | 5.9% | 4.6% | 4.1% | 3.9% | 3.6% | 3.2% | 2.4% | 1.4% | 0.8% | 100.0 |
| 1998 | 5.8% | 6.2% | 6.3% | 6.4% | 6.7% | 7.5% | 7.8% | 8.2% | 7.7% | 7.0% | 6.2% | 4.8% | 4.1% | 3.9% | 3.6% | 3.2% | 2.4% | 1.4% | 0.9% | 100.0 |
| 1999 | 5.7% | 6.1% | 6.3% | 6.4% | 6.6% | 7.4% | 7.5% | 8.2% | 7.7% | 7.0% | 6.5% | 5.0% | 4.1% | 3.9% | 3.5% | 3.2% | 2.4% | 1.5% | 0.9% | 100.0 |
| 2000 | 5.6% | 6.0% | 6.3% | 6.3% | 6.6% | 7.3% | 7.3% | 8.2% | 7.8% | 7.2% | 6.7% | 5.1% | 4.2% | 3.8% | 3.5% | 3.2% | 2.4% | 1.6% | 0.9% | 100.0 |
| 2001 | 5.5% | 5.9% | 6.3% | 6.3% | 6.6% | 7.0% | 7.3% | 8.1% | 7.8% | 7.3% | 6.8% | 5.3% | 4.3% | 3.8% | 3.5% | 3.1% | 2.5% | 1.6% | 1.0% | 100.0 |
| 2002 | 5.4% | 5.8% | 6.2% | 6.3% | 6.5% | 6.9% | 7.2% | 7.8% | 7.9% | 7.4% | 6.8% | 5.7% | 4.4% | 3.8% | 3.5% | 3.1% | 2.5% | 1.6% | 1.1% | 100.0 |
| 2003 | 5.4% | 5.7% | 6.2% | 6.3% | 6.5% | 6.7% | 7.2% | 7.6% | 7.9% | 7.5% | 6.8% | 6.0% | 4.6% | 3.8% | 3.5% | 3.1% | 2.6% | 1.6% | 1.1% | 100.0 |
| 2004 | 5.3% | 5.7% | 6.1% | 6.3% | 6.5% | 6.7% | 7.2% | 7.3% | 8.0% | 7.5% | 6.8% | 6.2% | 4.7% | 3.8% | 3.5% | 3.0% | 2.6% | 1.7% | 1.2% | 100.0 |
| 2005 | 5.2% | 5.6% | 6.0% | 6.3% | 6.5% | 6.6% | 7.0% | 7.1% | 8.0% | 7.5% | 7.0% | 6.4% | 4.9% | 3.9% | 3.5% | 3.0% | 2.5% | 1.7% | 1.2% | 100.0 |
| 2006 | 5.2% | 5.5% | 5.9% | 6.3% | 6.4% | 6.6% | 6.8% | 7.1% | 7.8% | 7.6% | 7.1% | 6.6% | 5.1% | 4.0% | 3.5% | 3.0% | 2.5% | 1.8% | 1.3% | 100.0 |
| The DPA Group Inc. | | | | | | | | | | | | | | | | | | | | |

Exhibit B7: Nova Scotia Population Sex Ratios^ by Age

| Year | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85-89 | 90+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1986 | 105 | 103 | 106 | 107 | 103 | 99 | 97 | 100 | 101 | 100 | 100 | 93 | 90 | 84 | 81 | 75 | 59 | 47 | 35 | 97 |
| 1987 | 105 | 103 | 106 | 106 | 105 | 99 | 98 | 99 | 101 | 100 | 100 | 94 | 89 | 84 | 79 | 74 | 59 | 47 | 33 | 97 |
| 1988 | 106 | 104 | 106 | 106 | 105 | 100 | 98 | 99 | 100 | 99 | 100 | 95 | 89 | 84 | 78 | 74 | 60 | 45 | 33 | 97 |
| 1989 | 106 | 104 | 106 | 105 | 106 | 101 | 98 | 98 | 99 | 99 | 101 | 95 | 89 | 84 | 78 | 72 | 61 | 46 | 31 | 97 |
| 1990 | 106 | 104 | 106 | 105 | 106 | 102 | 98 | 97 | 100 | 100 | 100 | 96 | 89 | 85 | 78 | 70 | 61 | 47 | 31 | 97 |
| 1991 | 106 | 105 | 104 | 106 | 107 | 103 | 99 | 96 | 99 | 100 | 99 | 98 | 90 | 85 | 77 | 70 | 60 | 46 | 31 | 97 |
| 1992 | 105 | 106 | 104 | 106 | 106 | 104 | 99 | 98 | 98 | 100 | 99 | 98 | 91 | 84 | 77 | 69 | 60 | 45 | 30 | 97 |
| 1993 | 105 | 106 | 104 | 106 | 105 | 104 | 100 | 97 | 98 | 99 | 98 | 98 | 92 | 84 | 77 | 68 | 60 | 46 | 29 | 97 |
| 1994 | 105 | 106 | 104 | 106 | 105 | 105 | 101 | 98 | 97 | 99 | 98 | 99 | 92 | 85 | 77 | 68 | 58 | 46 | 29 | 97 |
| 1995 | 105 | 106 | 104 | 106 | 105 | 105 | 102 | 98 | 96 | 99 | 100 | 98 | 93 | 85 | 78 | 67 | 57 | 47 | 30 | 97 |
| 1996 | 104 | 106 | 105 | 104 | 106 | 106 | 102 | 98 | 96 | 98 | 99 | 98 | 95 | 86 | 78 | 67 | 57 | 46 | 29 | 97 |
| 1997 | 104 | 106 | 106 | 104 | 106 | 105 | 103 | 98 | 97 | 97 | 99 | 98 | 95 | 87 | 77 | 67 | 56 | 46 | 29 | 97 |
| 1998 | 104 | 105 | 106 | 104 | 106 | 105 | 103 | 99 | 97 | 97 | 99 | 97 | 95 | 88 | 77 | 67 | 54 | 46 | 29 | 96 |
| 1999 | 104 | 105 | 107 | 104 | 106 | 104 | 104 | 100 | 97 | 97 | 98 | 97 | 97 | 88 | 77 | 67 | 55 | 45 | 30 | 96 |
| 2000 | 103 | 105 | 107 | 104 | 106 | 105 | 105 | 101 | 97 | 95 | 98 | 98 | 95 | 89 | 78 | 68 | 55 | 44 | 30 | 96 |
| 2001 | 103 | 105 | 106 | 106 | 104 | 105 | 105 | 101 | 97 | 95 | 98 | 98 | 95 | 90 | 79 | 68 | 54 | 44 | 30 | 96 |
| 2002 | 103 | 104 | 106 | 106 | 104 | 105 | 104 | 102 | 97 | 96 | 96 | 97 | 95 | 91 | 80 | 67 | 54 | 44 | 30 | 96 |
| 2003 | 103 | 104 | 106 | 106 | 104 | 105 | 104 | 103 | 98 | 96 | 97 | 97 | 94 | 91 | 81 | 67 | 55 | 43 | 30 | 96 |
| 2004 | 103 | 104 | 105 | 107 | 104 | 106 | 103 | 103 | 99 | 96 | 96 | 96 | 94 | 92 | 81 | 67 | 55 | 43 | 30 | 96 |
| 2005 | 103 | 104 | 105 | 107 | 104 | 105 | 104 | 104 | 100 | 96 | 94 | 97 | 95 | 91 | 82 | 68 | 55 | 43 | 29 | 96 |
| 2006 | 103 | 104 | 105 | 106 | 106 | 103 | 104 | 104 | 100 | 96 | 94 | 96 | 95 | 91 | 83 | 68 | 55 | 43 | 29 | 96 |

^ Sex ratios are defined as the number of males per 100 females.

The DPA Group Inc.

Exhibit 88: County Populations ('000)

| County | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annapolis | 23.6 | 23.7 | 23.8 | 24.0 | 24.2 | 24.4 | 24.6 | 24.8 | 25.0 | 25.3 | 25.5 | 25.7 | 25.9 | 26.2 | 26.4 | 26.6 | 26.8 | 27.0 | 27.2 | 27.4 | 27.6 |
| Antigonish | 18.8 | 18.9 | 19.0 | 19.1 | 19.2 | 19.3 | 19.4 | 19.5 | 19.7 | 19.8 | 19.9 | 20.0 | 20.2 | 20.3 | 20.4 | 20.5 | 20.6 | 20.7 | 20.9 | 21.0 | 21.0 |
| Cape Breton | 123.6 | 123.0 | 122.4 | 121.8 | 121.2 | 120.7 | 120.2 | 119.7 | 119.1 | 118.6 | 118.0 | 117.4 | 116.8 | 116.2 | 115.5 | 114.8 | 114.1 | 113.4 | 112.7 | 111.9 | 111.1 |
| Colchester | 45.1 | 45.4 | 45.7 | 46.0 | 46.3 | 46.6 | 46.9 | 47.2 | 47.5 | 47.8 | 48.1 | 48.4 | 48.7 | 49.0 | 49.3 | 49.6 | 49.8 | 50.0 | 50.2 | 50.4 | 50.6 |
| Cumberland | 34.8 | 34.6 | 34.5 | 34.4 | 34.2 | 34.2 | 34.1 | 34.0 | 33.9 | 33.8 | 33.8 | 33.7 | 33.6 | 33.5 | 33.4 | 33.4 | 33.3 | 33.2 | 33.0 | 32.9 | 32.8 |
| Digby | 21.8 | 21.9 | 21.9 | 22.0 | 22.1 | 22.1 | 22.2 | 22.2 | 22.3 | 22.3 | 22.4 | 22.4 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Guysborough | 12.7 | 12.7 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.9 | 12.9 | 12.9 | 13.0 | 13.0 | 13.0 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 | 13.1 |
| Halifax | 306.4 | 309.0 | 312.1 | 315.0 | 318.1 | 321.2 | 324.1 | 326.8 | 329.5 | 332.0 | 334.3 | 336.5 | 338.6 | 340.5 | 342.3 | 344.1 | 345.7 | 347.3 | 348.8 | 350.2 | 351.7 |
| Hants | 36.5 | 37.0 | 37.5 | 38.0 | 38.5 | 39.0 | 39.5 | 40.1 | 40.6 | 41.2 | 41.8 | 42.3 | 42.9 | 43.5 | 44.1 | 44.7 | 45.3 | 45.9 | 46.4 | 47.0 | 47.5 |
| Inverness | 22.0 | 21.9 | 21.9 | 21.8 | 21.8 | 21.8 | 21.7 | 21.7 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 | 21.7 | 21.7 |
| Kings | 53.3 | 53.8 | 54.3 | 54.9 | 55.5 | 56.1 | 56.7 | 57.3 | 57.9 | 58.5 | 59.2 | 59.8 | 60.3 | 60.9 | 61.5 | 62.0 | 62.6 | 63.1 | 63.6 | 64.1 | 64.5 |
| Lunenburg | 46.5 | 46.6 | 46.8 | 46.9 | 47.1 | 47.2 | 47.4 | 47.5 | 47.7 | 47.8 | 48.0 | 48.1 | 48.2 | 48.3 | 48.5 | 48.6 | 48.6 | 48.7 | 48.8 | 48.8 | 48.9 |
| Pictou | 49.8 | 49.6 | 49.5 | 49.3 | 49.2 | 49.1 | 49.0 | 48.9 | 48.8 | 48.7 | 48.6 | 48.5 | 48.4 | 48.3 | 48.1 | 48.0 | 47.9 | 47.7 | 47.6 | 47.4 | 47.2 |
| Queens | 13.1 | 13.1 | 13.1 | 13.2 | 13.2 | 13.2 | 13.3 | 13.3 | 13.4 | 13.4 | 13.4 | 13.5 | 13.5 | 13.6 | 13.6 | 13.7 | 13.7 | 13.7 | 13.8 | 13.8 | 13.8 |
| Richmond | 11.9 | 11.8 | 11.7 | 11.6 | 11.6 | 11.5 | 11.5 | 11.4 | 11.3 | 11.3 | 11.2 | 11.2 | 11.1 | 11.1 | 11.0 | 11.0 | 10.9 | 10.9 | 10.8 | 10.7 | 10.7 |
| Shelburne | 17.5 | 17.6 | 17.6 | 17.6 | 17.7 | 17.7 | 17.8 | 17.8 | 17.9 | 17.9 | 17.9 | 17.9 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 |
| Victoria | 8.8 | 8.8 | 8.8 | 8.9 | 8.9 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.1 | 9.2 | 9.2 | 9.2 | 9.2 | 9.3 | 9.3 | 9.3 | 9.4 | 9.4 | 9.4 |
| Yarmouth | 27.1 | 27.2 | 27.3 | 27.4 | 27.6 | 27.7 | 27.8 | 27.9 | 28.0 | 28.2 | 28.3 | 28.4 | 28.4 | 28.5 | 28.6 | 28.7 | 28.7 | 28.8 | 28.8 | 28.9 | 28.9 |
| Total | 873.1 | 876.6 | 880.7 | 884.6 | 889.1 | 893.5 | 897.9 | 902.2 | 906.3 | 910.3 | 914.2 | 917.9 | 921.3 | 924.6 | 927.5 | 930.3 | 932.8 | 935.2 | 937.3 | 939.2 | 941.0 |
| Hfx. Metro | 296.9 | 298.5 | 301.5 | 304.3 | 307.3 | 310.3 | 313.1 | 315.7 | 318.3 | 320.7 | 322.9 | 325.1 | 327.1 | 329.0 | 330.7 | 332.4 | 334.0 | 335.5 | 336.9 | 338.3 | 339.7 |

DPA Group Inc.

Exhibit 89: County Populations - Percentage of Provincial Total

| County | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annapolis | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.8% | 2.8% | 2.8% | 2.8% | 2.8% | 2.8% | 2.8% | 2.9% | 2.9% | 2.9% | 2.9% | 2.9% | 2.9% |
| Antigonish | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% |
| Cape Breton | 14.2% | 14.0% | 13.9% | 13.8% | 13.6% | 13.5% | 13.4% | 13.3% | 13.1% | 13.0% | 12.9% | 12.8% | 12.7% | 12.6% | 12.5% | 12.3% | 12.2% | 12.1% | 12.0% | 11.9% | 11.8% |
| Colchester | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.4% | 5.4% | 5.4% |
| Cumberland | 4.0% | 3.9% | 3.9% | 3.9% | 3.9% | 3.8% | 3.8% | 3.8% | 3.7% | 3.7% | 3.7% | 3.7% | 3.6% | 3.6% | 3.6% | 3.6% | 3.6% | 3.5% | 3.5% | 3.5% | 3.5% |
| Digby | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% |
| Guysborough | 1.5% | 1.5% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% | 1.4% |
| Halifax | 35.1% | 35.2% | 35.4% | 35.6% | 35.8% | 35.9% | 36.1% | 36.2% | 36.4% | 36.5% | 36.6% | 36.7% | 36.8% | 36.8% | 36.9% | 37.0% | 37.1% | 37.1% | 37.2% | 37.3% | 37.4% |
| Hants | 4.2% | 4.2% | 4.3% | 4.3% | 4.3% | 4.4% | 4.4% | 4.4% | 4.5% | 4.5% | 4.6% | 4.6% | 4.7% | 4.7% | 4.8% | 4.8% | 4.9% | 4.9% | 5.0% | 5.0% | 5.0% |
| Inverness | 2.5% | 2.5% | 2.5% | 2.5% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.4% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% | 2.3% |
| Kings | 6.1% | 6.1% | 6.2% | 6.2% | 6.2% | 6.3% | 6.3% | 6.4% | 6.4% | 6.4% | 6.5% | 6.5% | 6.5% | 6.6% | 6.6% | 6.7% | 6.7% | 6.7% | 6.8% | 6.8% | 6.9% |
| Lunenburg | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% | 5.2% |
| Pictou | 5.7% | 5.7% | 5.6% | 5.6% | 5.5% | 5.5% | 5.5% | 5.4% | 5.4% | 5.3% | 5.3% | 5.3% | 5.3% | 5.2% | 5.2% | 5.2% | 5.1% | 5.1% | 5.1% | 5.0% | 5.0% |
| Queens | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% |
| Richmond | 1.4% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.1% | 1.1% |
| Shelburne | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 1.9% | 1.9% | 1.9% | 1.9% | 1.9% | 1.9% | 1.9% | 1.9% |
| Victoria | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% |
| Yarmouth | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% | 3.1% |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

DPA Group Inc.

## EXHIBIT B10: PROVINCIAL, COUNTY AND HFX/DART CMA HOUSEHOLD AND FAMILY PROJECTIONS: 1986, 1991, 1996, 2001 AND 2006.

Model A, Households and Families, 1986

| Region | Households | Pr. Family | Non-Family | Families | Husb & Wife | Lone Parent |
|---|---|---|---|---|---|---|
| ANNAPOLIS | 8094 | 6215 | 1880 | 6274 | 5665 | 610 |
| ANTIGONISH | 5485 | 4245 | 1240 | 4310 | 3715 | 594 |
| CAPE BRETON | 38795 | 30945 | 7851 | 31645 | 26180 | 5464 |
| COLCHESTER | 15860 | 12025 | 3835 | 12163 | 10703 | 1460 |
| CUMBERLAND | 12301 | 9200 | 3100 | 9330 | 8100 | 1230 |
| DIGBY | 7516 | 5810 | 1705 | 5905 | 5170 | 734 |
| GUYSBOROUGH | 4085 | 3185 | 900 | 3229 | 2825 | 405 |
| HALIFAX CO | 107378 | 79560 | 27817 | 80826 | 70011 | 10815 |
| HANTS | 11806 | 9670 | 2135 | 9840 | 8800 | 1040 |
| INVERNESS | 6765 | 5300 | 1465 | 5369 | 4575 | 795 |
| KINGS | 18146 | 14315 | 3831 | 14495 | 12900 | 1595 |
| LUNENBURG | 16585 | 12935 | 3650 | 13105 | 11785 | 1320 |
| PICTOU | 16655 | 12765 | 3890 | 12950 | 11160 | 1790 |
| QUEENS | 4635 | 3580 | 1055 | 3650 | 3285 | 365 |
| RICHMOND | 3640 | 2915 | 725 | 3000 | 2605 | 395 |
| SHELBURNE | 5941 | 4765 | 1176 | 4845 | 4335 | 510 |
| VICTORIA | 2815 | 2155 | 660 | 2209 | 1905 | 305 |
| YARMOUTH | 9275 | 7215 | 2061 | 7350 | 6460 | 890 |
| NOVA SCOTIA | 295776 | 226798 | 68978 | 230494 | 200179 | 30315 |
| METRO HFX | 103737 | 76863 | 26874 | 78085 | 67637 | 10448 |

Model A, Households and Families, 1991

| Region | Households | Pr. Family | Non-Family | Families | Husb & Wife | Lone Parent |
|---|---|---|---|---|---|---|
| ANNAPOLIS | 8877 | 6651 | 2226 | 6667 | 5956 | 711 |
| ANTIGONISH | 5956 | 4501 | 1456 | 4557 | 3870 | 687 |
| CAPE BRETON | 40051 | 31271 | 8779 | 32011 | 25992 | 6019 |
| COLCHESTER | 17378 | 12844 | 4533 | 12931 | 11231 | 1700 |
| CUMBERLAND | 12844 | 9356 | 3489 | 9455 | 8092 | 1363 |
| DIGBY | 8066 | 6088 | 1978 | 6161 | 5322 | 839 |
| GUYSBOROUGH | 4353 | 3316 | 1037 | 3348 | 2889 | 459 |
| HALIFAX CO | 119701 | 86308 | 33393 | 87401 | 74613 | 12788 |
| HANTS | 13303 | 10691 | 2612 | 10811 | 9558 | 1253 |
| INVERNESS | 7093 | 5431 | 1662 | 5494 | 4606 | 888 |
| KINGS | 20206 | 15589 | 4616 | 15694 | 13801 | 1893 |
| LUNENBURG | 17864 | 13613 | 4251 | 13699 | 12185 | 1514 |
| PICTOU | 17427 | 13032 | 4395 | 13186 | 11194 | 1992 |
| QUEENS | 4973 | 3750 | 1223 | 3798 | 3381 | 417 |
| RICHMOND | 3732 | 2926 | 806 | 3001 | 2569 | 432 |
| SHELBURNE | 6357 | 4994 | 1363 | 5046 | 4463 | 582 |
| VICTORIA | 3050 | 2278 | 772 | 2329 | 1978 | 351 |
| YARMOUTH | 10049 | 7635 | 2413 | 7743 | 6717 | 1026 |
| NOVA SCOTIA | 321280 | 240276 | 81004 | 243332 | 208418 | 34913 |
| METRO HFX | 115642 | 83382 | 32260 | 84438 | 72084 | 12354 |

Model A, Households and Families, 1996

| Region | Households | Pr. Family | Non-Family | Families | Husb & Wife | Lone Parent |
|---|---|---|---|---|---|---|
| ANNAPOLIS | 9719 | 7105 | 2614 | 7048 | 6229 | 819 |
| ANTIGONISH | 6439 | 4751 | 1688 | 4781 | 3999 | 781 |
| CAPE BRETON | 40890 | 31249 | 9642 | 31910 | 25429 | 6481 |
| COLCHESTER | 18828 | 13566 | 5262 | 13548 | 11613 | 1935 |
| CUMBERLAND | 13324 | 9451 | 3873 | 9487 | 8003 | 1484 |
| DIGBY | 8547 | 6298 | 2248 | 6326 | 5391 | 935 |
| GUYSBOROUGH | 4607 | 3428 | 1178 | 3436 | 2925 | 512 |
| HALIFAX CO | 130578 | 91831 | 39047 | 92386 | 77725 | 14661 |
| HANTS | 14843 | 11701 | 3142 | 11719 | 10241 | 1477 |
| INVERNESS | 7429 | 5560 | 1869 | 5595 | 4616 | 979 |
| KINGS | 22282 | 16811 | 5471 | 16771 | 14571 | 2200 |
| LUNENBURG | 18975 | 14127 | 4848 | 14073 | 12380 | 1693 |
| PICTOU | 18067 | 13182 | 4885 | 13257 | 11086 | 2171 |
| QUEENS | 5284 | 3890 | 1394 | 3899 | 3434 | 466 |
| RICHMOND | 3803 | 2920 | 884 | 2974 | 2510 | 465 |
| SHELBURNE | 6706 | 5158 | 1548 | 5162 | 4514 | 648 |
| VICTORIA | 3257 | 2373 | 884 | 2412 | 2017 | 394 |
| YARMOUTH | 10733 | 7966 | 2767 | 8014 | 6860 | 1154 |
| NOVA SCOTIA | 344612 | 251367 | 93245 | 252797 | 213543 | 39254 |
| METRO HFX | 126441 | 88718 | 37723 | 89254 | 75089 | 14164 |

Model A, Households and Families, 2001

| Region | Households | Pr. Family | Non-Family | Families | Husb & Wife | Lone Parent |
|---|---|---|---|---|---|---|
| ANNAPOLIS | 10598 | 7559 | 3039 | 7406 | 6475 | 930 |
| ANTIGONISH | 6925 | 4988 | 1937 | 4979 | 4103 | 876 |
| CAPE BRETON | 41427 | 30981 | 10445 | 31497 | 24633 | 6864 |
| COLCHESTER | 20263 | 14231 | 6032 | 14071 | 11903 | 2168 |
| CUMBERLAND | 13773 | 9513 | 4260 | 9467 | 7871 | 1596 |
| DIGBY | 8971 | 6454 | 2517 | 6421 | 5397 | 1024 |
| GUYSBOROUGH | 4848 | 3524 | 1324 | 3499 | 2937 | 562 |
| HALIFAX CO | 141018 | 96282 | 44736 | 96043 | 79622 | 16421 |
| HANTS | 16506 | 12761 | 3744 | 12635 | 10913 | 1721 |
| INVERNESS | 7760 | 5675 | 2085 | 5671 | 4603 | 1068 |
| KINGS | 24342 | 17957 | 6386 | 17717 | 15207 | 2510 |
| LUNENBURG | 20034 | 14570 | 5464 | 14340 | 12475 | 1865 |
| PICTOU | 18646 | 13271 | 5375 | 13239 | 10905 | 2335 |
| QUEENS | 5607 | 4029 | 1578 | 3990 | 3475 | 515 |
| RICHMOND | 3872 | 2910 | 962 | 2938 | 2444 | 495 |
| SHELBURNE | 7006 | 5276 | 1730 | 5219 | 4511 | 708 |
| VICTORIA | 3457 | 2457 | 1000 | 2477 | 2041 | 436 |
| YARMOUTH | 11357 | 8233 | 3125 | 8201 | 6928 | 1274 |
| NOVA SCOTIA | 366409 | 260671 | 105738 | 259810 | 216443 | 43367 |
| METRO HFX | 136236 | 93018 | 43219 | 92787 | 76922 | 15864 |

Model A, Households and Families, 2006

| Region | Households | Pr. Family | Non-Family | Families | Husb & Wife | Lone Parent |
|---|---|---|---|---|---|---|
| ANNAPOLIS | 11290 | 7864 | 3426 | 7597 | 6571 | 1026 |
| ANTIGONISH | 7172 | 5047 | 2125 | 4990 | 4050 | 940 |
| CAPE BRETON | 40838 | 29908 | 10930 | 30220 | 23198 | 7022 |
| COLCHESTER | 21182 | 14513 | 6668 | 14186 | 11843 | 2343 |
| CUMBERLAND | 13639 | 9182 | 4457 | 9043 | 7411 | 1632 |
| DIGBY | 9204 | 6469 | 2735 | 6365 | 5277 | 1087 |
| GUYSBOROUGH | 4854 | 3449 | 1405 | 3388 | 2805 | 583 |
| HALIFAX CO | 154353 | 102653 | 51700 | 101369 | 82817 | 18552 |
| HANTS | 17118 | 12987 | 4131 | 12692 | 10835 | 1856 |
| INVERNESS | 7659 | 5477 | 2181 | 5427 | 4335 | 1092 |
| KINGS | 26105 | 18842 | 7263 | 18358 | 15567 | 2791 |
| LUNENBURG | 20649 | 14681 | 5968 | 14255 | 12263 | 1991 |
| PICTOU | 18763 | 13039 | 5724 | 12883 | 10452 | 2431 |
| QUEENS | 5778 | 4056 | 1722 | 3962 | 3413 | 549 |
| RICHMOND | 3866 | 2846 | 1020 | 2845 | 2332 | 513 |
| SHELBURNE | 7187 | 5303 | 1884 | 5177 | 4423 | 754 |
| VICTORIA | 3593 | 2493 | 1100 | 2489 | 2020 | 469 |
| YARMOUTH | 11779 | 8345 | 3433 | 8219 | 6851 | 1368 |
| NOVA SCOTIA | 385026 | 267154 | 117872 | 263462 | 216463 | 46999 |
| METRO HFX | 149119 | 99172 | 49947 | 97932 | 80009 | 17923 |